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New records of semiaquatic bugs (Hemiptera, Heteroptera, Gerromorpha) from the Caatinga biome, Brazil

Juliana Mourão dos Santos Rodrigues*, Felipe Ferraz Figueiredo Moreira

Fundação Oswaldo Cruz, Instituto Oswaldo Cruz, Laboratório de Entomologia, Rio de Janeiro, Rio de Janeiro, Brazil • JMSR: julianamourao@yahoo.com.br https://orcid.org/0000-0003-2872-138X • FFFM: ppmeiameiameia@gmail.com https://orcid.org/0000-0002-6692-0323

* Corresponding author

Abstract. Semiaquatic bugs (Hemiptera, Heteroptera, Gerromorpha) are small to mid-sized insects, currently represented by more than 2,100 known species distributed on all continents, except Antarctica. So far, 244 species have been recorded from Brazil, but only 63 from the Northeast Region of the country. The relatively small number of species in this region is related to the virtual lack of knowledge on the fauna of the Caatinga, a biome that is distributed essentially throughout this region. We present here new records for 28 species based on material collected in four federal conservation units of the Caatinga biome: Aiuaba Ecological Station (Ceará state), Chapada Diamantina National Park (Bahia state), Catimbau National Park (Pernambuco state), and Serra das Confusões National Park (Piauí state). Moreover, several species are recorded for the first time from at least one of these states: 11 from Bahia, 10 from Ceará, two from Pernambuco, and eight from Piauí.

Keywords. Aquatic insects, biodiversity, geographic distribution, Neotropical region, taxonomy, water striders

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Introduction

Semiaquatic bugs (Hemiptera, Heteroptera, Gerromorpha) are currently represented by eight families, approximately 160 genera, and more than 2100 species distributed on all continents, except Antarctica (Polhemus and Polhemus 2008; Moreira 2015). They are small to mid-sized insects, and most of them are adapted for walking or rowing on the surface of water (Crumière et al. 2016; Armisén et al. 2022). Gerromorphans can be commonly found on the surface or along the margins of freshwaters, but some taxa inhabit marine or terrestrial habitats (Andersen 1982; Schuh and Slater 1995; Dias-Silva et al. 2013; Moreira et al. 2018). So far, 244 species have been recorded from Brazil, but only 63 from the Northeast Region of the country (Moreira 2023a, 2023b, 2023c, 2023d, 2023e). Furthermore, many of these were recorded for the first time from the region very recently (Franco et al. 2020, 2021; Rodrigues et al. 2021a; Rodrigues and Moreira 2022).

The relatively small number of species known from the Northeast Region is related to the virtual lack of knowledge on the fauna of the Caatinga, a biome that is largely distributed throughout this region, apart from a small portion in northeastern Minas Gerais state (IBGE 2004). Currently, the number of species recorded from each state in the region is as follows: 32 from Alagoas, 20 from Bahia, seven from Ceará, 30 from Maranhão, three from Paraíba, 10 from Pernambuco, 11 from Piauí, four from Rio Grande do Norte, and 29 from Sergipe (Moreira 2023a, 2023b, 2023c, 2023d, 2023e). We present here new records for 28 species based on material collected in four federal conservation units of the Caatinga biome in the states of Bahia, Ceará, Pernambuco and Piauí, northeastern Brazil.

Study Area

The Northeast Region occupies 18.25% of the Brazilian territory, with 1,554,291 km², and includes nine states

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and four biomes (percentage of the region in parenthesis): Caatinga (65%), Atlantic Forest (17%), Cerrado (14%), and Amazon (4%) (IBGE 2004, 2018). The Caatinga is an exclusively Brazilian biome that occupies 10.3% (862,745 km^2) of the country and has a semi-arid climate. This reflects on the hydrological regime of the rivers and on a specialized vegetation, which is the most diverse in the world among those with this type of climate (MMA 2011; Rodrigues et al. 2021a; IBGE 2022a).

Currently, there are 26 federal conservation units (UCs) and 12 private natural heritage reserves in the Caatinga biome (ICMBio 2022). Four UCs were studied during this project: Aiuaba Ecological Station (Estação Ecológica de Aiuaba–EEA), Chapada Diamantina National Park (Parque Nacional da Chapada Diamantina–PNCD), Serra das Confusões National Park (Parque Nacional da Serra das Confusões–PNSC), and Catimbau National Park (Parque Nacional do Catimbau–PNCA) (Fig. 1).

Aiuaba Ecological Station (Fig. 2) was created in February 2001, occupies an area of 11,525 hectares, and is located in Aiuaba municipality, Ceará state (BRASIL 2001). Although EEA represents only 0.07% of the territorial area of the state (14,889,444 ha), it is important in the hydrological cycle of the Alto Jaguaribe hydrographic sub-basin due to its dense vegetation cover (MMA 2006; IBGE 2022b). This ecological station is located in one of the most isolated areas of Ceará, the Sertão dos Inhamuns microregion, with elevations ranging from 400 to 700 m a.s.l., annual rainfall values between 590 and 684 mm, with rainy periods concentrated in the months of December to June; the station displays typical arboreal Caatinga vegetation (MMA 2006, 2017).

Chapada Diamantina National Park (Fig. 3) was created in September 1985, occupies an area of 152,132 ha, and is distributed among six municipalities of Bahia state: Andaraí, Ibicoara, Itaetê, Lençóis, Mucugê, and Palmeiras (BRASIL 1985; ICMBio 2007). This UC represents 0.27% of the territorial area of the state and a watershed between the Middle São Francisco and the Itaperuçu-Paraguaçu sub-basins. Furthermore, two of the largest rivers in Bahia, the Contas and the Paraguaçu, are formed within the UC (MMA 2017; IBGE 2022c). The vegetation of PNCD is a mosaic that

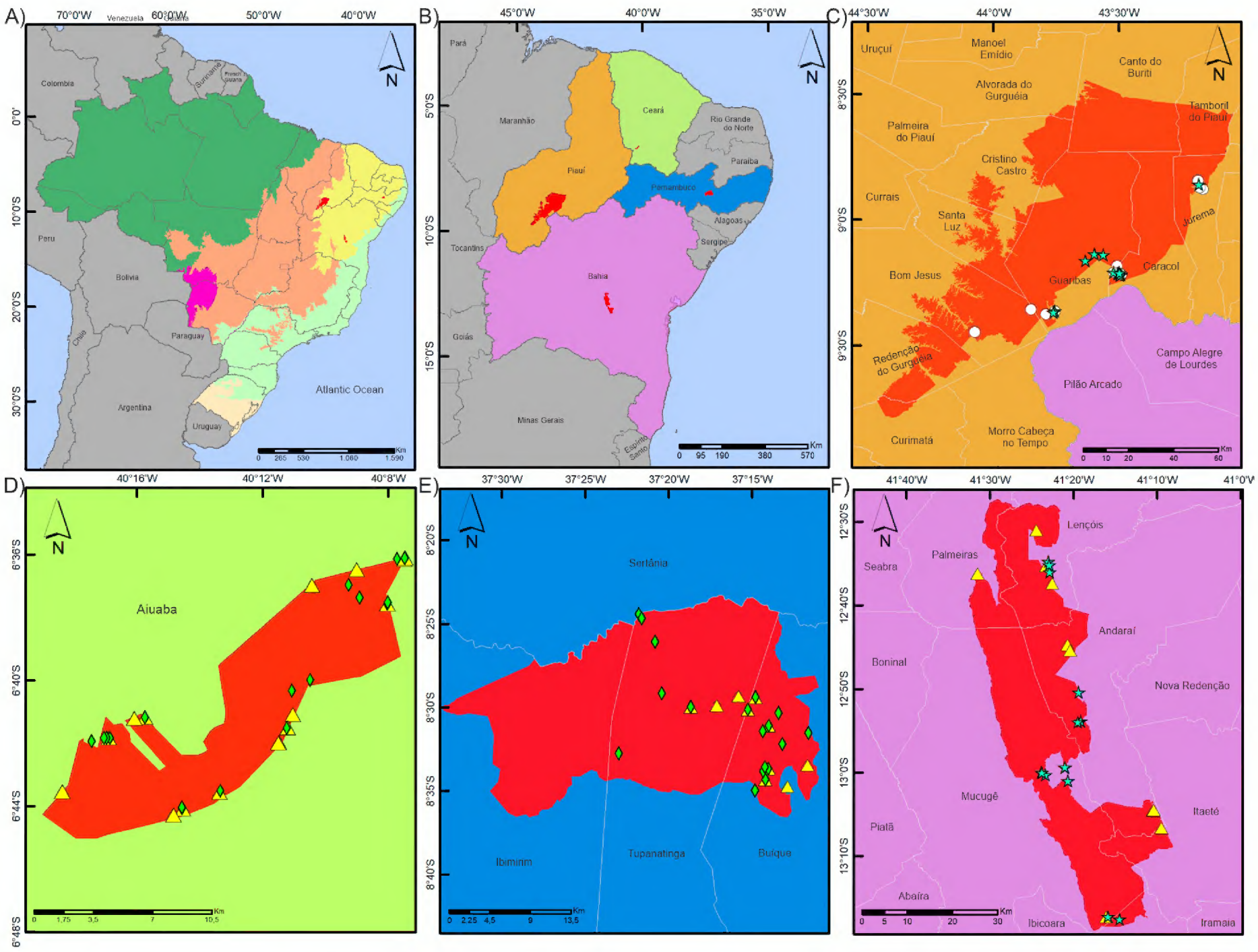

Figure 1. Geographic distribution of Gerromorpha in four federal conservation units (UCs) of the Caatinga biome, northeastern Brazil. **A.** Brazilian biomes and the UCs: Amazon in dark green, Cerrado in orange, Caatinga in yellow, Pantanal in pink, Atlantic Forest in light green, Pampa in beige, and UCs in red. **B.** Location of the UCs (red) in the states of Piauí (orange), Ceará (green), Pernambuco (blue) and Bahia (purple). **C–E.** Collecting localities. **C.** Serra das Confusões National Park. **D.** Aiuaba Ecological Station. **E.** Catimbau National Park. **F.** Chapada Diamantina National Park. Blue stars show the sampling stations of 2018; green rhombus show those of 2019; white circles show those of 2020; and yellow triangles show those of 2021.

Figure 2. Photographs of some collecting localities in the Aiuaba Ecological Station, Ceará state, Brazil. **A.** Gameleira House, weir (–06.6992, –40.2908). **B.** Flooded area beside the road (–06.6974, –40.2829). **C.** Cajueiro House, weir (–06.6722, –40.1846). **D.** Vaginha da Gameleira, weir (–06.6866, –40.2625). **E.** Rozio Lagoon, weir (–06.6231, –40.1487). **F.** Letreiro Weir (–06.6163, –40.1545). **G.** Sítio Jatobá, weir (–06.7351, –40.2424). **H.** Weir (–06.6850, –40.1841). **I.** Weir (–06.6921, –40.1871). **J.** Sítio Volta de Cima, ICMBio Headquarters, lake (–06.6019, –40.1246). **K.** Lagoon (–6.6080, –40.1502). **L.** Weir (–06.7263, –40.2229). **M.** Weir (–06.7384, –40.2475). **N.** Puddle (–06.6866, –40.2625).

includes xerophytic formations at elevations of approximately 500–900 m a.s.l., typical of the Caatinga biome; grassland formations, from forest formations to those devoid of trees with intense grass cover, normally associated with the Cerrado biome; formations with deciduous, semideciduous or even evergreen characteristics, associated with the Atlantic Forest biome; and rupestrian formations on exposed rock or lithosols, generally above 1000 m a.s.l., known as rupestrian fields (Velloso et al. 2002). Elevations generally range from 500 to 1000 m a.s.l., with several peaks reaching between 1600 and 1800 m a.s.l., and some points above 2000 m a.s.l. Rainfall in the park area is high and mainly of orographic origin, with greater intensity in its eastern portion (MMA 2017).

Serra das Confusões National Park (Fig. 4) was created in October 1998 and later expanded in December 2010. Today, it occupies 823,436 ha spread over

Figure 3. Photographs of some collecting localities in the Chapada Diamantina National Park, Bahia state, Brazil. **A.** River (–13.0054, –41.3891). **B.** Paraguaçu River (–12.9908, –41.3507). **C.** River (–12.9002, –41.3249). **D.** Donana Waterfall (–12.8401, –41.3235). **E.** River (–12.5791, –41.3835). **F.** Ribeirão de Baixo, river (–12.5865, –41.3822). **G.** Preto River (–12.6036, –41.5250). **H.** Véu de Noiva Waterfall (–13.2881, –41.2682). **I, J.** Timbó River (–13.0749, –41.1737). **K.** Samina River (–13.1105, –41.1587). **L.** Garapa River (–12.7456, –41.3453). **M.** Garapa River, puddle with organic material (–12.7559, –41.3399). **N.** Mandassaia River (–12.5167, –41.4077).

12 municipalities in southeastern Piauí, representing 3.2% of the state's territorial area: Alvorada do Gurguéia, Bom Jesus, Brejo do Piauí, Canto do Buriti, Caracol, Cristino Castro, Curimatá, Guaribas, Jurema, Redenção de Gurguéia, Santa Luz, and Tamboril do Piauí (BRASIL 1998, 2010; IBGE 2022d). Its relief is relatively flat, with an average elevation of 600 m a.s.l. and with emphasis on the sandstone plateaus and adjacent depressions of the Parnaíba basin. The average annual rainfall is 650 mm, and large trees predominate in the vegetation at lower elevations, some reaching 20 m in height. At higher elevations, trees are medium-sized, up to 6 m in height. In the wetter valleys, undergrowth associated with bromeliads and pteridophytes predominates, with giant trees punctuating the environment (MMA 2017).

Catimbau National Park (Fig. 5) was created in December 2002, occupies an area of 62,555 ha, and is distributed along four municipalities of Pernambuco state (Buíque, Ibimirim, Sertânia, and Tupanatinga), representing 0.63% of its area (BRASIL 2002; MMA 2017; IBGE 2022e). This UC is part of the Caatinga Ecological Corridor, created in 2006 with aims such as conserving biological diversity, ensuring gene flow, and connecting protected areas (IBAMA 2006). The park has beautiful geomorphological formations, with plateaus, canyons, and small caves, where there are archaeological sites with inscriptions and cave

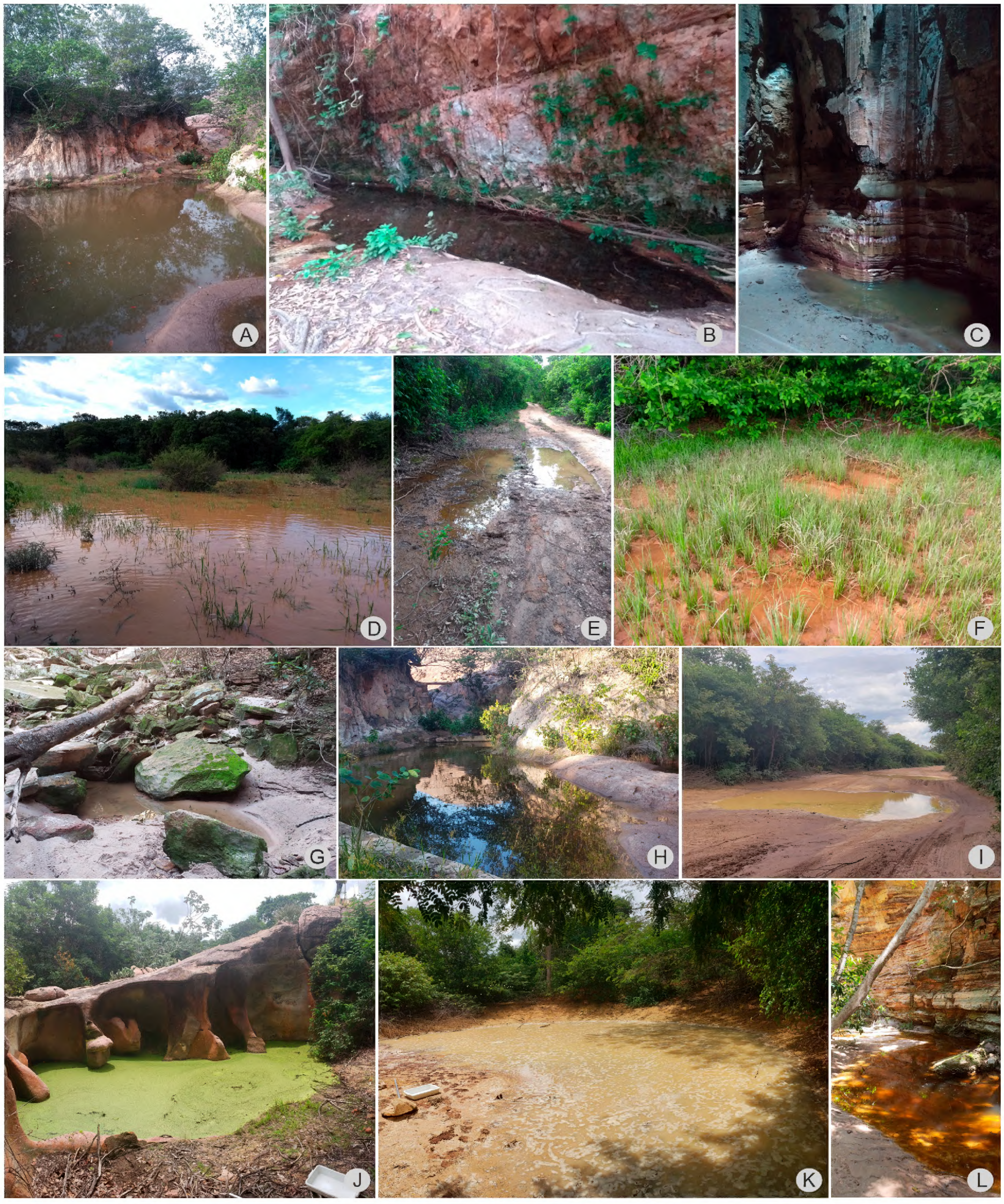

Figure 4. Photographs of some collecting localities in the Serra das Confusões National Park, Piauí state, Brazil. **A.** Puddle between the Janela do Sertão belvedere and the cemetery (–09.2192, –43.4902). **B.** Puddle near the Museu do Vaqueiro (–9.1379, –43.5972). **C.** Puddle on the Catedral (–09.1377, –43.5974). **D.** Weir (–09.2131, –43.4985). **E.** Puddles (–09.2221, –43.4956). **F.** Bank of the weir (–09.2109, –43.5201). **G.** Riacho do Boi, puddle (–09.2199, –43.4923). **H.** Puddle beside the road, near the cemetery (–09.2185, –43.4904). **I.** Puddles on the road to Santa Luz (–9.3760, –43.7914). **J.** Sucumbido, pothole (–08.8792, –43.1658). **K.** Sucumbido, flooded area near the road (–08.8719, –43.1771). **L.** Povoado Capim, Arampué, sinkhole (–09.1841, –43.5070).

paintings estimated to be up to 6000 years old. The predominant climate in the region is the semi-arid of the transition zone between the agreste and the hinterland of Pernambuco, with average annual temperatures of 23 °C and about 60–75% of the rainfall occurring from March to July. The least rainy period is from September to January, with October being the driest month. The local Caatinga vegetation has endemic species, especially cacti and bromeliads (MMA 2017).

Methods

Aiming to cover different areas based on climate, alti-

Figure 5. Photographs of some collecting localities in the Catimbau National Park, Pernambuco state, Brazil. **A.** Perennial lake (–08.5725, –37.2367). **B.** Pothole (–08.5643, –37.2389). **C.** Salgado Stream, temporary puddles (–08.5260, –37.1938). **D.** Brejo de São José Farm, temporary puddle (–08.5372, –37.2200). **E.** Poll inside a private property (–8.5463, –37.3832). **F.** Caldeirões da Igrejinha, temporary puddles (–08.5024, –37.2543). **G.** Serrinha, Casa de Edivar, pothole with temporary puddles (–08.5189, –37.2335). **H.** Região dos Breus, Umburanas Trail, pothole (–08.4891, –37.2637). **I.** Rock potholes next to the dirt road near Igrejinha (–08.5024, –37.2543). **J.** Serra do Catimbau, weir (–08.5791, –37.2147). **K.** Olho D'água do Pico (–08.5577, –37.1950). **L.** Puddle on the rock (–08.5619, –37.2337).

tude, and vegetation, we performed collections at the four UCs during eight expeditions between 2018 and 2021. These collections were part of the project "Diversidade e Conservação de Hemiptera (Insecta) da Caatinga" (Conselho Nacional de Desenvolvimento Científico e Tecnológico, CNPq, grant number 421.413/2017-4). We conducted the collections with permits from the National System of Biodiversity Authorization and Information (SISBIO; permits #62159-1, #62159-2, #62159-3, #62159-4, and #62159-5). We collected specimens by active search with the aid of aquatic nets, and with light traps (white sheet). Specimens are deposited in the Coleção Entomológica do Instituto Oswaldo Cruz, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil (CEIOC).

We took photographs of the specimens using a Leica M205 C stereomicroscope coupled with a digital camera, using the Leica LAS imaging system. We obtained geographic coordinates of the collecting localities with a GPS receiver and produced maps using ArcGIS v. 10.5 (ESRI Inc., Redlands, CA, USA). The distribution presented for each species is according to Moreira

(2023a, 2023b, 2023c, 2023d, 2023e), and abbreviations of Brazilian states are according to the official standard (IBGE 2022f). First state records are highlighted by asterisks (*).

Results

Family Gerridae (8 genera, 17 species)
Subfamily Charmatometrinae (1 genus, 1 species)
Genus *Brachymetra* Mayr, 1865 (1 species)

***Brachymetra albinervus* (Amyot & Serville, 1843)**
Figure 6A

New records. BRAZIL – **Bahia** • Andaraí, Igatu, PNCD, river; –12.9002, –41.3249; alt. 773 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82270 • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, 2 ♀, CEIOC 82271 • Ibicoara, PNCD, trail to the Fumacinha Waterfall, Paraguaçu River; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82272 • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 3 ♂, CEIOC 82273 • Mucugê, PNCD, Paraguaçu River; –12.9908, –41.3507; alt. 893 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82274 • Mucugê, PNCD, Véu de Noiva Waterfall; –13.2881, –41.2682; alt. 776 m; 06.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, CEIOC 82275. – **Ceará** • Aiuaba, EEA, tributary / weir; –06.6997, –40.1916; alt. 513 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82276 • Aiuaba, EEA, Sítio Jatobá, weir; –06.7351, –40.2424; alt. 571 m; 03.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 6 ♂, 3 ♀, CEIOC 82277. – **Piauí** • Guaribas, PNSC, Povoado Capim, Arampué, sinkhole; –09.1841, –43.5070; alt. 517 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, 6 ♀, CEIOC 82278.

Identification. Our specimens have the following combination of characteristics that distinguishes them from their congeners: antennomere I shorter than antennomeres II and III together; eye not surpassing the anterolateral angle of the pronotum; pronotum with apex rounded, reaching the mesoacetabulum in the apterous form; acetabula with silvery setae on the dorsum; fore femur robust and slightly arched, with sparse conical black setae ventrally; and male paramere wide, with obtuse apex (Cordeiro 2017).

General distribution. Bolivia, Brazil, Colombia, Costa Rica, Dominica, Ecuador, French Guiana, Grenada, Guadeloupe, Guatemala, Honduras, Martinique, Panama, Paraguay, Peru, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AL, AM, BA, CE, ES, MA, MG, MT, PA, PI*, RJ, RS, SE, SP.

Subfamily Cylindrostethinae (1 genus, 1 species)
Genus *Cylindrostethus* Mayr, 1865 (1 species)

***Cylindrostethus palmaris* Drake & Harris, 1934**
Figure 6B

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♀, CEIOC 82279.

Identification. Our apterous female was identified based on the body mostly yellow, the lateral black stripes of the mesonotum as wide as the median yellow stripe, and the black fore tibia (Floriano et al. 2016).

General distribution. Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AL, AP, AM, BA, ES, GO, MA, MG, MS, MT, PA, RJ, RN, RO, RR, SE, SP.

Subfamily Gerrinae (3 genera, 5 species)
Tribe Gerrini (2 genera, 4 species)
Genus *Limnogonus* Stål, 1868 (3 species)

***Limnogonus aduncus aduncus* Drake & Harris, 1933**
Figure 6C

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, CEIOC 82280 • Lençóis, PNCD, Ribeirão de Baixo, river; –12.5865, –41.3822; alt. 345 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82281. – **Ceará** • Aiuaba, EEA, Sítio Volta de Cima, Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 4 ♀, CEIOC 82282 • Aiuaba, EEA, tributary / weir; –06.6997, –40.1916; alt. 513 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82283. – **Piauí** • Bom Jesus, PNSC, Viana, puddles on dirt road; –09.4484, –44.0743; alt. 396 m; 15.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, 1 ♀, CEIOC 82284 • Caracol, PNSC, weir; –09.2109, –43.5201; alt. 498 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♀, CEIOC 82285 • Caracol, PNSC, puddle between the Janela do Sertão belvedere and the cemetery; –09.2192, –43.4902; alt. 566 m; 10.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♀, CEIOC 82286 • Caracol, PNSC, puddles beside the road, near the cemetery; –09.2185, –43.4904; alt. 565 m; 13.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, 1 ♀, CEIOC 82287 • Jurema, PNSC, Sucumbido, potholes; –08.8792, –43.1658; 549 m; 15.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, 3 ♀, CEIOC 82288.

Identification. Our specimens were identified based on the following characteristics: antennomere I longer than the head width through the eyes; mesopleuron dorsally dark, with a lighter stripe on the center; and male abdominal segment VIII with a single recurved projection ventrally (Nieser and Melo 1997).

General distribution. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Guyana, Panama,

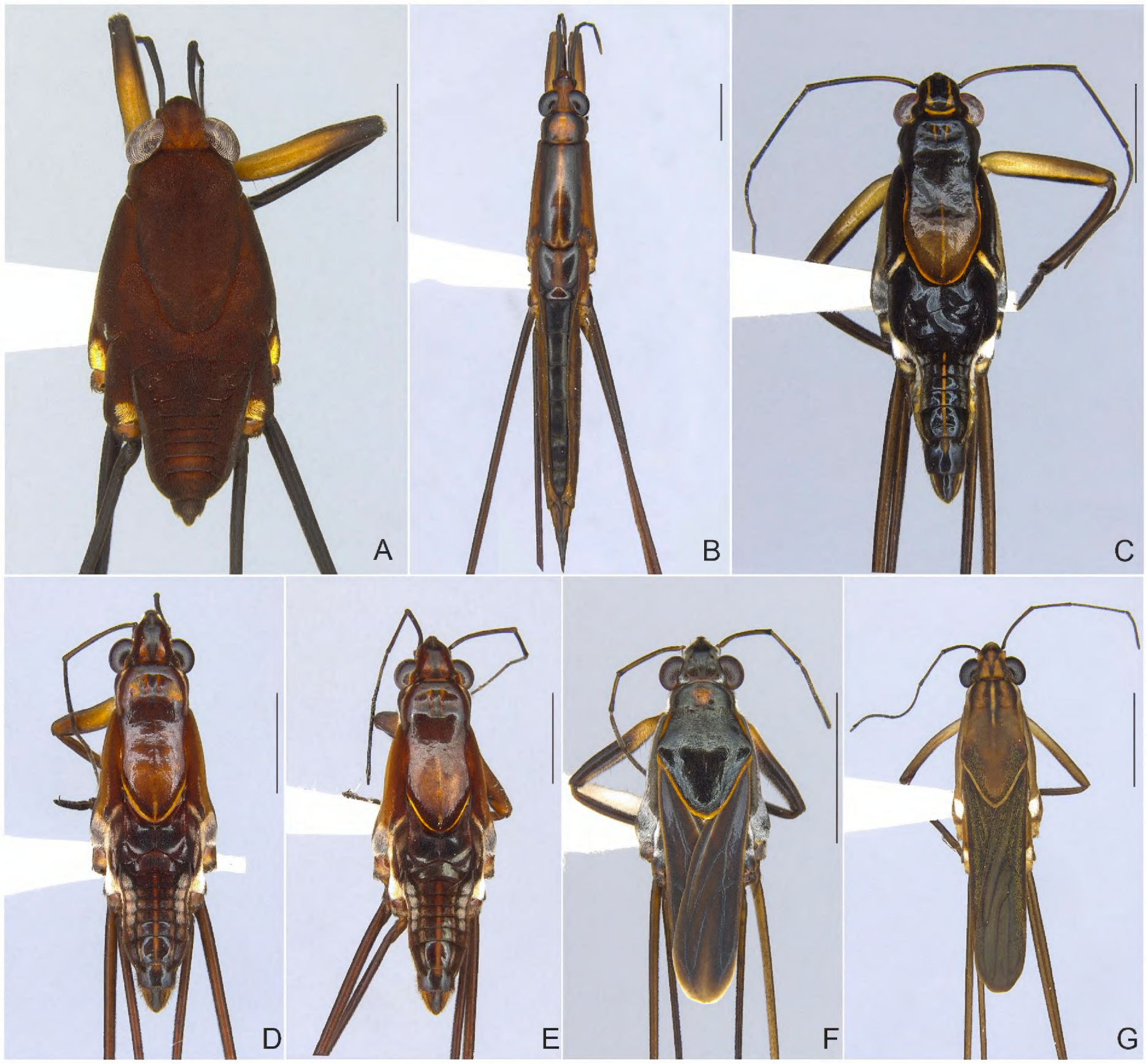

Figure 6. Collected specimens. **A.** *Brachymetra albinervus*, apterous male from Mucugê, Bahia (–13.2881, –41.2682). **B.** *Cylindrostethus palmaris*, apterous female from Andaraí, Bahia (–12.7456, –41.3453). **C.** *Limnogonus aduncus aduncus*, apterous male from Andaraí, Bahia (–12.8401, –41.3235). **D.** *L. profugus*, apterous male from Lençóis, Bahia (–12.6008, –41.3810). **E.** *L. recurvus*, apterous male from Andaraí, Bahia (–12.9002, –41.3249). **F.** *Neogerris lubricus*, macropterous male from Lençóis, Bahia (–12.5865, –41.3822). **G.** *Tachygerris adamsoni*, macropterous male from Aiuaba, Ceará (–06.6921, –40.1871). Scale bars: 2 mm.

Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AL, AM, BA, CE*, ES, MG, MT, MS, PA, PE, PI*, PR, RJ, RR, SC, SE, SP.

Limnogonus profugus Drake & Harris, 1930

Figure 6D

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82289 • Lençóis, PNCD; –12.6008, –41.3810, river; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82290 • Mucugê, PNCD, river; –13.0054, –41.3891; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82291 • Mucugê, PNCD, Paraguaçu River; –13.0004, –41.3982; alt. 984 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 2 ♀, CEIOC 82292. – **Piauí** • Bom Jesus, PNSC, Viana, puddles on dirt road; –09.4484, –44.0743; alt. 396 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♀, CEIOC 82293 • Caracol, PNSC, weir; –09.2109, –43.5201; alt. 498 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, 4 ♀, CEIOC 82294 • Caracol, PNSC, weir; –09.2131, –43.4985; alt. 512 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♂, 2 ♀, CEIOC 82295 • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; –09.2110, –43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 3 ♀, CEIOC 82296.

Identification. The main characteristic found in our specimens that distinguishes them from their South American congeners is the mesopleuron mainly brown and ventrally limited by a band of silvery setae. They can also be distinguished based on the antennomere

I longer than the head width, including the eyes; the abdominal segment VIII of the males without an apical projection on the ventral surface; and the posterior projection of the last abdominal laterotergite of the females weakly developed (Nieser and Melo 1997).

General distribution. Argentina, Brazil, Paraguay, Peru.

Distribution in Brazil. AL, BA*, CE, GO, MG, MT, MS, PA, PB, PE, PI*, RJ, RS, SE, SP.

***Limnogonus recurvus* Drake & Harris, 1930**
Figure 6E

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82297• Andaraí, PNCD, Igatu, river; –12.9002, –41.3249; alt. 773 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82298 • Andaraí, PNCD, Garapa River, puddle with organic material; –12.7559, –41.3399; alt. 329 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, 3 ♀, CEIOC 82299 • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, 2 ♀, CEIOC 82300 • Lençóis, PNCD, river; –12.6008, –41.3810; alt. 346 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, 2 ♀, CEIOC 82301 • Lençóis, PNCD, river; –12.5791, –41.3835; alt. 348 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, CEIOC 82302 • Mucugê, PNCD, river; –13.0054,–41.3891; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82303 • Mucugê, PNCD, Paraguaçu River; –13.0004, –41.3982; alt. 984 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 3 ♀, CEIOC 82304.

Identification. Our male specimens were identified based on the presence of a rounded gibbosity on the venter of abdominal segment VIII, in addition to a posterior curved spine-like projection. Additionally, both males and females have the mesopleuron brown with a lighter stripe of variable size (Nieser and Melo 1997).

General distribution. Brazil, Bolivia.

Distribution in Brazil. AL, AM, BA, MA, MG, MT, PA, PE, RO, SE, SP.

Genus *Neogerris* Matsumura, 1913 (1 species)

***Neogerris lubricus* (White, 1879)**
Figure 6F

New records. BRAZIL – **Bahia** • Lençóis, PNCD, Ribeirão de Baixo, river; –12.5865, –41.3822; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 7 ♂, 5 ♀, CEIOC 82305.– **Ceará** • Aiuaba, EEA, Gameleira House, weir; –06.6992, –40.2908; alt. 525 m; 08.IV.2019; J.M.S. Rodrigues leg.; 8 ♂, 4 ♀, CEIOC 82306 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, pool; –06.6019, –40.1247; alt. 434 m; 10.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82307 • Aiuaba, EEA, Sítio Jatobá, flooded weir; –06.7346, –40.2429; alt. 572 m; 11.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 5 ♀, CEIOC 82308. • Aiuaba, EEA, Rozio Lagoon, weir; –06.6231, –40.1487; 492 m; 13.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82309 • Aiuaba, EEA, Sítio Volta de Baixo, full weir; –06.6262, –40.1339; alt. 431 m; 14.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 3 ♀, CEIOC 82310 • Aiuaba, EEA, weir and stream; –06.6921, –40.1871; alt. 507 m; 04.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 1 ♂, 2 ♀, CEIOC 82311 • Aiuaba, EEA, weir; –06.6850, –40.1841; alt. 489 m; 04.VI.2021; J.M.S. Rodrigues, F. F.F. Moreira leg.; 2 ♂, CEIOC 82312 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 3 ♀, CEIOC 82313 • Aiuaba, EEA, Sítio Jatobá, weir; –06.7351, –40.2424; alt. 571 m; 03.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♀, CEIOC 82314 • Aiuaba, EEA, road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 3 ♀, CEIOC 82315 • Aiuaba, EEA, tributary / weir; –06.6997, –40.1916; alt. 513 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♀, CEIOC 82316 • Aiuaba, EEA, weir; –06.7384, –40.2475; alt. 584 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82317 • Aiuaba, EEA, weir; –06.7263, –40.2229; alt. 570 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♀, CEIOC 82318. – **Piauí** • Caracol, PNSC, weir; –09.2109, –43.5201; alt. 498 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 3 ♂, 2 ♀, CEIOC 82319 • Caracol, PNSC, weir; –09.2131, –43.4985; alt. 512 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♀, CEIOC 82320 • Guaribas, PNSC, puddles on the road to Santa Luz; –09.3696, –43.7601; alt. 657 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82321.

Identification. Our specimens can be distinguished from other South American species of the genus by the body shorter than 5 mm; the pronotum of the apterous form longer than wide, with the posterior lobe covering the mesonotum entirely or almost entirely; the shape of the last abdominal laterotergite of females in lateral view; and the abdominal segment VIII of the male, in dorsal view, with subequal length and width (Nieser 1994; Nieser and Melo 1997).

General distribution. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AL, AM, AP, BA, CE*, MA, MG, MS, MT, PA, PI, RJ, RO, RS, SE, SP.

Tribe Tachygerrini (1 genus, 1 species)
Genus *Tachygerris* Drake, 1957 (1 species)

***Tachygerris adamsoni* (Drake, 1942)**
Figure 6G

New records. BRAZIL – **Ceará** • Aiuaba, EEA, weir and stream; –06.6921, –40.1871; alt. 507 m; 04.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 1 ♂, CEIOC

82330. – **Piauí** • Caracol, PNSC, puddle between the Janela do Sertão belvedere and the cemetery; –09.2192, –43.4902; alt. 566 m; 10.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82322 • Caracol, PNSC, stream near the sinkhole; –09.2213, –43.4954; alt. 551 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82323 • Caracol, PNSC, puddles; –09.2221, –43.4956; alt. 555 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 6 ♂, 4 ♀, CEIOC 82324 • Caracol, PNSC; –09.2140, –43.4965; alt. 526 m; 15.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 4 ♂, 5 ♀, CEIOC 82325 • Caracol, PNSC, Riacho do Boi, puddles; –09.2199, –43.4923; alt. 560 m; 13.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 6 ♂, 3 ♀, CEIOC 82326 • Caracol, PNSC, Povoado Sobrado, sinkhole, headspring; –09.2138, –43.4964; alt. 532 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 6 ♂, 6 ♀, CEIOC 82327 • Guaribas, PNSC, puddle near the Museu do Vaqueiro; –09.1379, –43.5972; alt. 525 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 6 ♂, 4 ♀, CEIOC 82328 • Guaribas, PNSC, Povoado Capim, Arampué, sinkhole; –09.1841, –43.5070; alt. 517 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 4 ♂, 10 ♀, CEIOC 82329.

Identification. Our specimens were identified based on the male fore femur without a basal tubercle, but instead with a fringe of setae on this area; and the posterior projection of the female last abdominal laterotergite long, distinctly surpassing the posterior margin of abdominal sternum VII, which is almost straight, without projections (Nieser 1970; Morales and Molano 2009).

General distribution. Bolivia, Brazil, Colombia, French Guiana, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AL, AM, CE*, MA, MG, MT, PA, PI, RJ, SE.

Subfamily Microveliinae (1 genus, 8 species)
Tribe Microveliini (1 genus, 8 species)
Genus *Microvelia* Westwood, 1834 (8 species)

Microvelia ayacuchana Drake & Maldonado-Capriles, 1952

Figure 7A

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 12 ♂, 8 ♀, CEIOC 82472 • Andaraí, PNCD, Igatu, river; –12.9002, –41.3249; alt. 773 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♂, 4 ♀, CEIOC 82471 • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, 2 ♀, CEIOC 82475 • Lençóis, PNCD, Mandassaia River; –12.5167, –41.4077; alt. 501 m; 09.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, 1 ♀, CEIOC 82476 • Mucugê, PNCD, Véu de Noiva Waterfall; –13.2881, –41.2682; alt. 776 m; 06.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, CEIOC 82477 • Mucugê, PNCD, Paraguaçu River; –12.9908, –41.3507; alt. 893 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 13 ♂, 8 ♀, CEIOC 82470 • Mucugê, PNCD; –13.0174, –41.3441; alt. 966 m; 21.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 6 ♂, 13 ♀, CEIOC 82473 • Palmeiras, PNCD, Preto River; –12.6036, –41.5250; alt. 820 m; 05.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 7 ♂, 4 ♀, CEIOC 82474.

Identification. *Microvelia ayacuchana* can be grouped with those species of *Microvelia* with a very short pronotum in the apterous form. Our specimens were identified based on the abdominal sternum VII of the males longer than the preceding two together, with a large central U-shaped notch at the posterior margin; and the venter of abdominal segment VIII centrally depressed, with a long posterior projection (Moreira 2012). The females were identified by association with males from the same localities, but also because of their strongly produced last abdominal laterotergite (Drake and Maldonado-Capriles 1952).

General distribution. Brazil, Guyana, Suriname, Venezuela.

Distribution in Brazil. AL, AM, BA*, ES, PA, PI, SE.

Microvelia hamadae Dos Santos, Rodrigues, Couceiro & Moreira, 2021

Figure 7B

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Igatu, river; –12.9002, –41.3249; alt. 773 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, CEIOC 82478 • Andaraí, PNCD; Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, CEIOC 82479 • Ibicoara, PNCD, Una River; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, CEIOC 82481 • Lençóis, PNCD, river; –12.5791, –41.3835; alt. 348 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 14 ♂, 8 ♀, CEIOC 82480.

Identification. *Microvelia hamadae* groups with those species of *Microvelia* with the pronotum of the apterous form long, covering the mesonotum and the metanotum completely or almost completely. Our specimens were identified based on the metanotum visible only as a very short central stripe; the posterior margin of the male abdominal mediotergite VII with a pronounced concavity; the male abdominal segment VIII deeply inserted into the pregenital abdomen, with the posterior margin dorsally concave and ventrally with a weak median notch; the shape of the female abdomen, with abdominal laterotergites elevated to about 90°; and by the pattern of whitish maculae on the fore wings of macropterous specimens (Dos Santos et al. 2021).

General distribution. Brazil.

Distribution in Brazil. BA*, PA.

Figure 7. Collected specimens. **A.** *Microvelia ayacuchana*, apterous male from Andaraí, Bahia (–12.8401, –41.3235). **B.** *M. hamadae*, apterous male from Lençóis, Bahia (–12.5791, –41.3835). **C.** *M. longipes*, macropterous male from Guaribas, Bahia (–09.3696, –43.7601). **D.** *M. mimula*, macropterous male from Caracol, Piauí (–09.2149, –43.5036). Scale bars: 1 mm.

***Microvelia longipes* Uhler, 1894**

Figure 7C

New records. BRAZIL – **Bahia** • Mucugê, PNCD, BA-242 Highway, near the bridge Dr. Heitor M. Chamusca; –12.9900, –41.3503; alt. 894 m; 20.VIII.2018; R. Carrenho leg.; light trap; 1 ♀, CEIOC 82482 • Mucugê, PNCD, trail to the das Pedras Stream; –13.0007, –41.3962; alt. 984 m; light trap; 26.VIII.2018; R. Carrenho leg.; 1 ♂,

CEIOC 82483. – **Ceará** • Aiuaba, EEA, puddle on the road; –06.6973, –40.2811; alt. 516 m; 09.IV.2019; J.M.S. Rodrigues leg.; 7 ♂, 5 ♀, CEIOC 82484 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, pool; –06.6019, –40.1247; alt. 435 m; 10.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, 4 ♀, CEIOC 82485 • Aiuaba, EEA, Vaginha da Gameleira, weir; –06.6866, –40.2625; alt. 510 m; 12.IV.2019; J.M.S. Rodrigues leg.; 3 ♂, 1 ♀, CEIOC 82486 • Aiuaba, EEA, Letreiro Weir; –06.6163, –40.1545; alt. 475 m; 13.IV.2019; J.M.S. Rodrigues leg.; 2 ♀, CEIOC 82487 • Aiuaba, EEA, Sítio Volta de Baixo, full weir; –06.6262, –40.1339; alt. 431 m; 14.IV.2019; J.M.S. Rodrigues leg.; 2 ♀, CEIOC 82488 • Aiuaba, EEA, Sítio Volta de Baixo; –06.6254, –40.1336; alt. 431 m; light trap; 14.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, CEIOC 82489 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters; –06.6025, –40.1286; alt. 460 m; 10.IV.2019; J.M.S. Rodrigues leg.; light trap; 2 ♀, CEIOC 82490 • Aiuaba, EEA, puddle; –06.6866, –40.2625; alt. 507 m; 06.VI.2021; J.M.S. Rodrigues , F.F.F. Moreira leg.; 9 ♂, 17 ♀, CEIOC 82491 • Aiuaba, EEA, road next to weir; –06.6920, –40.1869; alt. 486 m; 04.VI.2021; J.M.S. Rodrigues leg.; light trap; 2 ♂, 1 ♀, CEIOC 82492 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82493 • Aiuaba, EEA, road near the Gameleira Stream; –06.6870, –40.2682; alt. 493 m; 06.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82494. – **Pernambuco** • Buíque, PNCA, Catimbau Stream, temporary puddle next to the river bed; –08.5834, –37.2469; alt. 745 m; 18.III.2019; H. Rodrigues , J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82501 • Buíque, PNCA, Buíque, Serra do Catimbau, weirs; –08.5791, –37.2147; alt. 976 m; 14.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 4 ♀, CEIOC 82502 • Tupanatinga, PNCA, potholes approximately 600 m north of the brigadistas' house, temporary puddles; –08.5643, –37.2389; alt. 783 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82495 • Tupanatinga, PNCA, temporary puddle on the trail to Farinha's House; –08.5615, –37.2339; alt. 814 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82496 • Tupanatinga, PNCA, Barreiro do Pititi, temporary puddle; –08.5599, –37.2375; alt. 832 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♀, CEIOC 82497 • Tupanatinga, PNCA, Brejo de São José Farm, perto da sede, temporary puddle; –08.5372, –37.2200; alt. 699 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82498 • Tupanatinga, PNCA, Brejo de São José Farm, temporary puddle; –08.5060, –37.2237; alt. 700 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♂, 10 ♀, CEIOC 82499 • Tupanatinga, PNCA, Juá Farm, temporary stream that crosses the farm road, puddles in the river bed; –08.4350, –37.3469; alt. 548 m; 17.III.2019; H. Rodrigues , J.M.S. Rodrigues leg.; 3 ♀, CEIOC 82500. – **Piauí** • Bom Jesus, PNSC, puddles on the road to Santa Luz, hunters' shortcut; –09.3575, –43.8498; alt. 643 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 5 ♂, 15 ♀, CEIOC 82509 • Bom Jesus, PNSC, Viana, puddles on dirt road; –09.4484, –43.0743; alt. 396 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 7 ♂, 8 ♀, CEIOC 82510 • Caracol, PNSC, puddle between the Janela do Sertão belvedere and the cemetery; –09.2192, –43.4902; alt. 566 m; 10.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♀, CEIOC 82503 • Caracol, PNSC, weir; –09.2131, –43.4985; alt. 512 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, 2 ♀, CEIOC 82504 • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; –09.2110, –43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 5 ♂, 8 ♀, CEIOC 82513 • Caracol, PNSC, Povoado Sobrado, sinkhole, headspring; –09.2138, –43.4964; alt. 532 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 12 ♂, 15 ♀, CEIOC 82514 • Caracol, PNSC, puddles beside the road, near the cemetery; –09.2185, –43.4904; alt. 565 m; 13.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♀, CEIOC 82516 • Caracol, PNSC; –09.2140, –43.4965; alt. 526 m; 15.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 30 ♂, 34 ♀, CEIOC 82508 • Guaribas, PNSC, Brejão, weir; –09.3650, –43.7544; alt. 640 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 8 ♂, 15 ♀, CEIOC 82515 • Guaribas, PNSC, weir; –09.1649, –43.6322; alt. 409 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 3 ♂, 16 ♀, CEIOC 82505 • Guaribas, PNSC, puddles on the road to Santa Luz; –09.3696, –43.7601; alt. 657 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 4 ♂, 5 ♀, CEIOC 82506 • Guaribas, PNSC, weir; –09.3649, –43.7546; alt. 640 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♀, CEIOC 82507 • Guaribas, PNSC, puddles on the road to Santa Luz; –09.3760, –43.7914; alt. 685 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 7 ♂, 21 ♀, CEIOC 82512 • Jurema, PNSC, Sucumbido, flooded area near the road; –08.8719, –43.1771; alt. 562 m; 15.II.2020; J.M.S. Rodrigues leg.; 6 ♂, 1 ♀, CEIOC 82511.

Identification. Our specimens were identified based on the exaggeratedly long hind legs, especially in the males (Moreira 2012).

General distribution. Argentina, Aruba, Barbados, Bolivia, Bonaire, Brazil, Colombia, Cuba, Curaçao, Dominican Republic, Ecuador, French Guiana, Grenada, Guyana, Jamaica, Paraguay, Peru, Puerto Rico, St. Barthélemy, St. Eustatius, St. Kitts and Nevis, St. Martin, Trinidad and Tobago, U.S. Virgin Islands, Venezuela.

Distribution in Brazil. AL, AM, BA, CE*, ES, MG, MS, PA, PE*, PI*, RJ, RR, SC, SP.

Microvelia mimula White, 1879

Figure 7D

New records. BRAZIL – **Bahia** • Lençóis, PNCD, Ribeirão do Meio, river; –12.5860, –41.3817; alt. 343 m; 22.VIII.2018; R. Carrenho leg.; light trap; 1 ♂, 3 ♀, CEIOC 82518 • Lençóis, PNCD, Capivara River; –12.6232, –41.3763; alt. 329 m; 09.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 1 ♀, CEIOC 82520 • Mucugê, PNCD, BA-242 Highway, near Dr. Heitor M. Chamusca

bridge; –12.9900, –41.3503; alt. 894 m; 20.VIII.2018; R. Carrenho leg.; light trap; 1 ♀, CEIOC 82517 • Mucugê, PNCD; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 2 ♀, CEIOC 82519 • Mucugê, PNCD; –13.0054, –41.3896; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82521. – **Ceará** • Aiuaba, EEA, weir and stream; –06.6921, –40.1871; alt. 507 m; 04.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 1 ♂, CEIOC 82524 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; C.C. Gonçalves leg.; light trap; 1 ♂, CEIOC 82525. – **Piauí** • Caracol, PNSC, near the road; –09.2149, –43.5036; alt. 513 m; 12.XII.2018; R. Carrenho leg.; mixed light trap; 1 ♂, 1 ♀, CEIOC 82522 • Guaribas, PNSC, puddles on dirt road; –09.1649, –43.6322; alt. 409 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82523.

Identification. *Microvelia mimula* can be grouped with those species of *Microvelia* with the pronotum of apterous form covering the mesonotum, but not the metanotum. Our specimens were identified based on the terminalia of the male, with the dorsum of abdominal segment VIII expanded laterally, the venter of this segment widely excavated on the posterior margin, and the proctiger with a pair of lateral, long, horn-like projections (Drake and Carvalho 1954; Moreira 2012).

General distribution. Argentina, Barbados, Brazil, Colombia, Costa Rica, Cuba, Ecuador, French Guiana, Grenada, Panama, Paraguay, Peru, Puerto Rico, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela.

Distribution in Brazil. AL, AM, BA*, CE, ES, MA, MG, MS, MT, PA, PI*, RJ, RS, SC, SE, SP.

Microvelia nelsoni Moreira, Barbosa & Ribeiro, 2012

Figure 8A

New records. BRAZIL – **Bahia** • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, CEIOC 82526.

Identification. *Microvelia nelsoni* can be grouped with those species of *Microvelia* in which the pronotum of apterous form covers most of the dorsum of thorax, leaving only the posterolateral metathoracic triangles exposed. Our male specimen was identified by the generally black body coloration, with an orange-red mark on the pronotum, and areas of silvery pubescence along the mesal eye margin, the base of head, the sides of abdominal mediotergites I and IV, the center of mediotergites V–VII, and on laterotergites adjacent to mediotergites III–VI. The pattern of silvery pubescence on the abdomen described above differs a little from that on the original description of the species (Moreira et al. 2012), but we consider this to be just an intraspecific variation.

General distribution. Brazil.

Distribution in Brazil. BA*, PA, RJ, SP.

Microvelia pulchella Westwood, 1834

Figure 8B

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 5 ♂, 24 ♀, CEIOC 82530 • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 17 ♂, 7 ♀, CEIOC 82533 • Lençóis, PNCD, Capivara River; –12.6232, –41.3763; alt. 329 m; 09.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 1 ♀, CEIOC 82527 • Lençóis, PNCD, Mandassaia River; –12.5167, –41.4077; alt. 501 m; 09.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, 1 ♀, CEIOC 82532 • Mucugê, PNCD, Paraguaçu River; –12.9908, –41.3507; alt. 893 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 29 ♂, 32 ♀, CEIOC 82528 • Mucugê, PNCD; –13.0004, –41.3982; alt. 984 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, CEIOC 82529 • Mucugê, PNCD; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82531 • Palmeiras, PNCD, Preto River; –12.6036, –41.5250; alt. 820 m; 05.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 3 ♂, CEIOC 82534 • Mucugê, PNCD; –13.0054, –41.3891; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 11 ♂, 3 ♀, CEIOC 82535. – **Ceará** • Aiuaba, EEA, puddle; –06.6866; –40.2625; alt. 507 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82536 • Aiuaba, EEA, puddle on the road; –06.6973, –40.2811; alt. 516 m; 09.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, 2 ♀, CEIOC 82537 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2829; alt. 518 m; 09.IV.2019; J.M.S. Rodrigues leg.; 7 ♂, 9 ♀, CEIOC 82538 • Aiuaba, EEA, flooded area beside the road to Cajueiro's House; –06.6923, –40.1872; alt. 508 m; 10.IV.2019; J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82539 • Aiuaba, EEA, Cajueiro House, weir; –06.6722, –40.1846; alt. 450 m; 10.IV.2019; J.M.S. Rodrigues leg.; 4 ♂, 2 ♀, CEIOC 82540 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, pool; –06.6019, –40.1247; alt. 435 m; 10.IV.2019; J.M.S. Rodrigues leg.; 10 ♂, 12 ♀, CEIOC 82541 • Aiuaba, EEA, Sítio Boa Vista, flooded area; –06.7255, –40.2226; alt. 570 m; 11.IV.2019; J.M.S. Rodrigues leg.; 3 ♂, 1 ♀, CEIOC 82542 • Aiuaba, EEA, Vaginha da Gameleira, weir; –06.6866, –40.2625; alt. 510 m; 12.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, 2 ♀, CEIOC 82543 • Aiuaba, EEA, flooded area next the road to Gameleira House; –06.6973, –40.2843; alt. 518 m; 12.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 7 ♀, CEIOC 82544 • Aiuaba, EEA, Rozio Lagoon, weir; –06.6231, –40.1487; alt. 492 m; 13.IV.2019; J.M.S. Rodrigues leg.; 14 ♂, 10 ♀, CEIOC 82545 • Aiuaba, EEA, Letreiro Weir; –06.6163, –40.1545; alt. 475 m; 13.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 4 ♀, CEIOC 82546 • Aiuaba, EEA, Sítio Volta de Baixo, full weir; –06.6262, –40.1339; alt. 431 m; 14.IV.2019; J.M.S. Rodrigues leg.; 5 ♂, 9 ♀, CEIOC 82547 • Aiuaba, EEA, Sítio Volta de Baixo; –06.6254, –40.1336; alt. 441 m; 14.IV.2019; J.M.S. Rodrigues leg.; light trap; 2 ♂, 1 ♀, CEIOC 82548 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters;

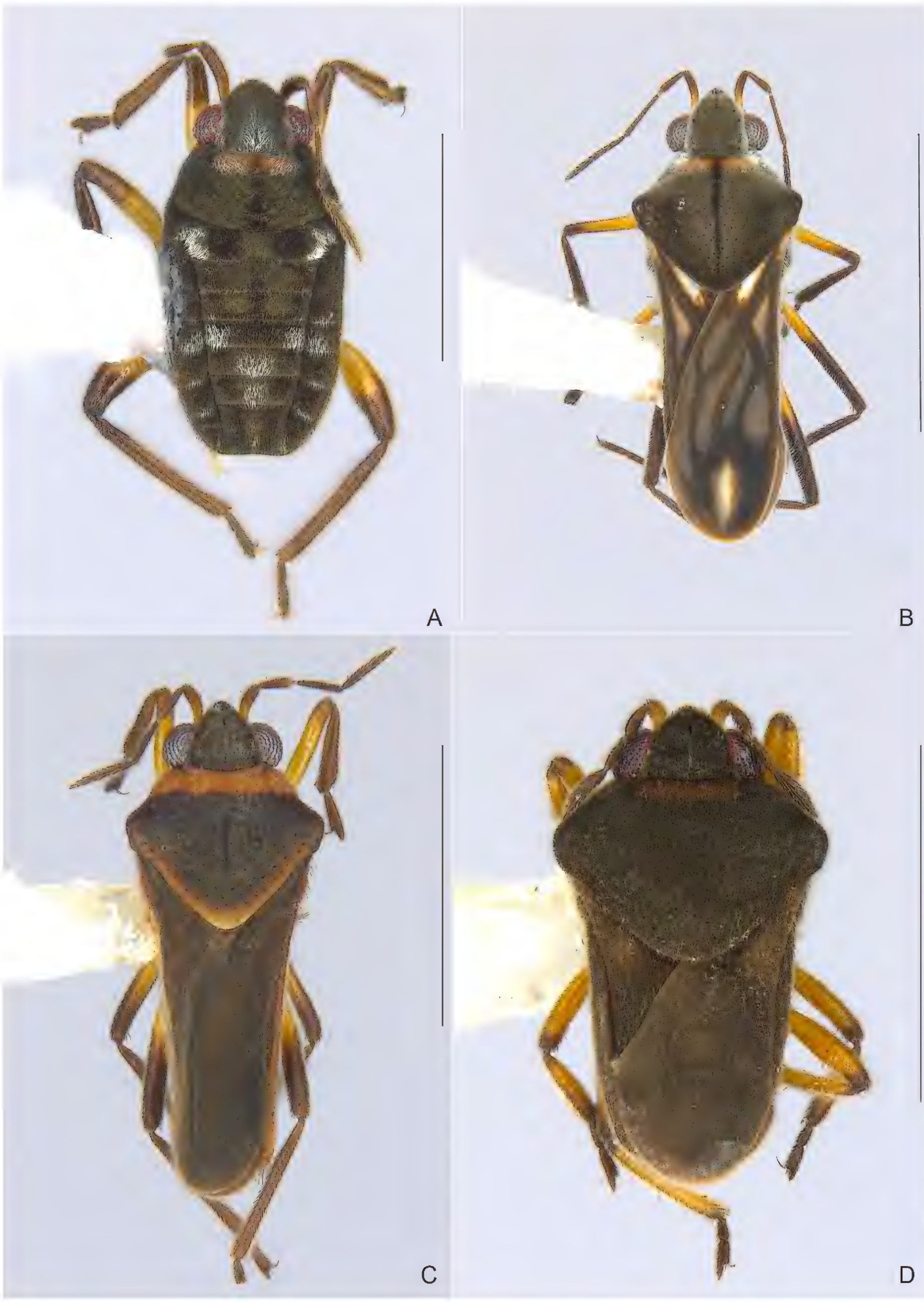

Figure 8. Collected specimens. **A.** *Microvelia nelsoni*, apterous male from Itaeté, Bahia (–13.0749, –41.1737). **B.** *M. pulchella*, macropterous male from Tupanatinga, Pernambuco (–08.5652, –37.2389). **C.** *M. quieta*, macropterous male from Caracol, Piauí (–09.2213, –43.4954). **D.** *M. venustatis*, macropterous male from Aiuaba, Ceará (–06.6921, –40.1871). Scale bars: 1 mm.

–06.6025, –40.1286; alt. 460 m; 10.IV.2019; J.M.S. Rodrigues leg.; light trap; 4 ♂, 1 ♀, CEIOC 82549 • Aiuaba, EEA, Sítio Jatobá; –06.7343, –40.2430; alt. 581 m; 15.IV.2019; J.M.S. Rodrigues leg.; light trap; 4 ♂, 4 ♀, CEIOC 82550 • Aiuaba, EEA, Sítio do Martins; –06.6667, –40.1749; alt. 476 m; 12.IV.2019; J.M.S. Rodrigues leg.; light trap; 2 ♀, CEIOC 82551 • Aiuaba, EEA, weir; –06.6850, –40.1841; alt. 489 m; 04.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♂, 4 ♀, CEIOC 82552 • Aiuaba, EEA, weir; –06.7384, –40.2475; alt. 584 m; 07.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 1 ♀, CEIOC 82553 • Aiuaba, EEA, weir; –06.7263, –40.2229; alt. 570 m; 05.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 1 ♂, 2 ♀, CEIOC 82554 • Aiuaba, EEA, Umbuzeiro Stream; –06.6164, –40.1739; alt. 451 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 4 ♀, CEIOC 82555 • Aiuaba, EEA, tributary / weir; –06.6997, –40.1916; alt. 513 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82556 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F. F.F. Moreira leg.; 14 ♂, 10 ♀, CEIOC 82557 • Aiuaba, EEA, Sítio Jatobá, weir; –06.7351, –40.2424; alt. 571 m; 03.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 19 ♂, 22 ♀, CEIOC 82558. – **Pernambuco** • Buíque, PNCA, temporary puddle next to the river bed; –08.5834, –37.2469; alt. 745 m; 18.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82571 • Buíque, PNCA, Serra do Catimbau, weirs; –08.5791, –37.2147; alt. 976 m; 14.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 2 ♂, 2 ♀, CEIOC 82582 • Buíque, PNCA, Buíque, Olho D'água do Pico; –08.5577, –37.1950; alt. 763 m; 15.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 9 ♂, 6 ♀, CEIOC 82583 • Ibimirim, PNCA, poll inside a private property ; –08.5463, –37.3832; 19.III.2019; H. Rodrigues , J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82572 • Tupanatinga, PNCA, puddle approximately 400 m west of the brigadistas' house, perennial lake;–08.5725, –37.2367; alt. 818 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 40 ♂, 65 ♀, CEIOC 82559 • Tupanatinga, PNCA, potholes approximately 400 m north of the brigadistas' house, temporary puddles; –08.5643, –37.2389; alt. 783 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 4 ♂, 3 ♀, CEIOC 82560 • Tupanatinga, PNCA, temporary puddle on the trail to Farinha's House; –08.5615, –37.2339; alt. 814 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 12 ♂, 14 ♀, CEIOC 82561 • Tupanatinga, PNCA, Barreiro do Pititi, temporary puddle; –08.5599, –37.2375; alt. 832 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 7 ♂, 4 ♀, CEIOC 82562 • Tupanatinga, PNCA, Salgado Stream, start of the trail to the Alcobaça Archaeological Site, temporary puddles; –08.5260, –37.1938; alt. 670 m; 15.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 4 ♂, 7 ♀, CEIOC 82563 • same data, except: D.M. Takiya leg.; 1 ♂, CEIOC 82564 • Tupanatinga, PNCA, Brejo de São José Farm, near the headquarters, temporary puddle; –08.5372, –37.2200; alt. 699 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, 3 ♀, CEIOC 82565 • Tupanatinga, PNCA, Brejo de São José Farm, temporary puddle; –08.5060, –37.2237; alt. 700 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♂, 1 ♀, CEIOC 82566 • Tupanatinga, PNCA, Laranjeiras Farm, temporary puddle next to the road; –08.5002, –37.3111; alt. 825 m; 17.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82567 • Tupanatinga, PNCA, Juá Farm, headquarters, dry stream that formed a puddle; –08.4073, –37.3630; alt. 524 m; 17.III.2019; H. Rodrigues , J.M.S. Rodrigues leg.; 3 ♂, 1 ♀, CEIOC 82568 • Tupanatinga, PNCA, Juá Farm, temporary puddle covered with small macrophytes; –08.4116, –37.3601; alt. 541 m; 17.III.2019; H. Rodrigues leg.; 1 ♀, CEIOC 82569 • Tupanatinga, PNCA, Juá Farm, temporary stream that crosses the farm road, puddles in the river bed; –08.4350, –37.3469; alt. 548 m; 17.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 11 ♂, 17 ♀, CEIOC 82570 • Tupanatinga, PNCA, Igrejinha, barragem de Valdira, temporary puddle; –08.4902, –37.2465; alt. 853 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82573 • Tupanatinga, PNCA, Chapadão, temporary puddle; –08.5244, –37.2394; alt. 937 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 2 ♂, 3 ♀, CEIOC 82574 • Tupanatinga, PNCA, Serrinha, Casa de Edivar, pothole with temporary puddles; –08.5189, –37.2335; alt. 971 m; 21.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♀, CEIOC 82575 • Tupanatinga, PNCA, Barro Branco, Comunidade Muquém, weirs; –08.5001, –37.3112; alt. 824 m; 10.III.2021; J.M.S. Rodrigues , R. Jordão leg.; 3 ♀, CEIOC 82576 • Tupanatinga, PNCA, puddle next to the road; –08.4982, –37.2852; alt. 904 m; 10.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♂, 3 ♀, CEIOC 82577 • Tupanatinga, PNCA, Região dos Breus, Umburanas Trail, pothole; –08.4891, –37.2637; alt. 896 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 5 ♂, 4 ♀, CEIOC 82578 • Tupanatinga, PNCA, Igrejinha, barragem de Valdira (dry, puddle in mud); –08.4905, –37.2466; alt. 858 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 2 ♂, 1 ♀, CEIOC 82579 • Tupanatinga, PNCA, rock potholes next to the dirt road near Igrejinha; –08.5024, –37.2543; alt. 949 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♂, 1 ♀, CEIOC 82580 • Tupanatinga, PNCA, Serrinha, rock potholes; –08.5188, –37.2337; alt. 929 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 4 ♂, 5 ♀, CEIOC 82581 • Tupanatinga, PNCA, ICMBio Headquarters, pond; –08.5724, –37.2367; alt. 807 m; 16.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 17 ♂, 15 ♀, CEIOC 82584 • Tupanatinga, PNCA, Tupanatinga, puddles on the rock; –08.5619, –37.2337; alt. 817 m; 16.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 6 ♂, 6 ♀, CEIOC 82585. – **Piauí** • Bom Jesus, PNSC, puddles on the road to Santa Luz, hunters shortcut; –09.3575, –43.8498; alt. 643 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, CEIOC 82596 • Bom Jesus, PNSC, Viana, puddles on dirt road; –09.4484, –44.0743; alt. 396 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 13 ♂, 24 ♀, CEIOC 82597 • Caracol, PNSC, puddle between the Janela do Sertão belvedere and the cemetery; –09.2192, –43.4902; alt. 566 m; 10.XII.2018; J.M.S.

Rodrigues, O.M. Magalhães leg.; 18 ♂, 22 ♀, CEIOC 82586 • Caracol, PNSC, weir; −09.2131, −43.4985; alt. 512 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 22 ♂, 41 ♀, CEIOC 82587 • Caracol, PNSC, weir; −09.2109, −43.5201; alt. 498 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♂, 25 ♀, CEIOC 82589 • Caracol, PNSC, near the road; −09.2137, −43.4986; alt. 514 m; 11.XII.2018; C.C. Gonçalves leg.; mixed light trap; 1 ♀, CEIOC 82592 • Caracol, PNSC, dry river; −09.2137, −43.5000; alt. 512 m; 15.XII.2018; R. Carrenho leg.; mixed light trap; 1 ♂, 2 ♀, CEIOC 82593 • Caracol, PNSC, near the road; −09.2149, −43.5036; alt. 514 m; 12.XII.2018; R. Carrenho leg.; mixed light trap; 3 ♂, 1 ♀, CEIOC 82594 • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; −09.2110, −43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 14 ♂, 29 ♀ CEIOC 82600 • Caracol, PNSC, puddles on the side of the road, near the cemetery; −09.2185, −43.4904; alt. 565 m; 13.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 12 ♂, 9 ♀ CEIOC 82603 • Caracol, PNSC, dry river; −09.2137, −43.5000; alt. 512 m; 15.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; mixed light trap; 14 ♂, 11 ♀, CEIOC 82604 • Caracol, PNSC, near the road; −09.2149, −43.5036; alt. 513 m; 15.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; mixed light trap; 1 ♂, 2 ♀, CEIOC 82605 • same data, except: 12.XII.2018; C.C. Gonçalves leg.; 1 ♂, 5 ♀, CEIOC 82606 • Caracol, PNSC, near the road; −09.2137, −43.4986; alt. 514 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; mixed light trap; 1 ♂, CEIOC 82607 • Guaribas, PNSC, puddles on dirt road; −09.1649, −43.6322; alt. 409 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 16 ♂, 19 ♀, CEIOC 82588 • Guaribas, PNSC, puddles on the road to Santa Luz; −09.3696, −43.7601; alt. 657 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 8 ♂, 13 ♀, CEIOC 82590 • Guaribas, PNSC, weir; −09.3649, −43.7546; alt. 640 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 36 ♂, 47 ♀, CEIOC 82591 • Guaribas, PNSC, puddles on the road to Santa Luz; −09.3760, −43.7914; alt. 685 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, CEIOC 82599 • Guaribas, PNSC, Brejão, weir; −09.3650, −43.7544; alt. 640 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 12 ♂, 3 ♀ CEIOC 82601 • Jurema, PNSC, Sucumbido, flooded area near the road; −08.8719, −43.1771; alt. 562 m; 15.II.2020; J.M.S. Rodrigues leg.; 5 ♂, 7 ♀ CEIOC 82598 • Jurema, PNSC, Sucumbido, potholes; −08.8792, −43.1658; alt. 549 m; 15.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 20 ♂, 19 ♀ CEIOC 82602 • Jurema, PNSC, Casa do Sucumbido, at the ICMBio headquarters of Jurema; −08.8597, −43.1817; alt. 564 m; 13.XII.2018; J.M.S. Rodrigues leg.; mixed light trap; 1 ♂, CEIOC 82608 • São Braz, PNSC, park road; −08.8451, −43.1847; alt. 565 m; 15.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, 1 ♀, CEIOC 82595.

Identification. Our specimens of *M. pulchella* were identified based on the pronotum of the apterous form not covering the mesonotum; the male body elongated, subcylindrical; the male hind tibia bent; the male terminalia aligned with the longitudinal axis of the body; the male abdominal segment VIII ventrally without depressions, projections, or notches; and the female body robust and rounded (Moreira 2012).

General distribution. Anguilla, Argentina, Aruba, Bahamas, Barbados, Bonaire, Brazil, Canada, Cayman Islands, Colombia, Costa Rica, Cuba, Curaçao, Dominican Republic, Ecuador, French Guiana, Grenada, Guadeloupe, Guatemala, Jamaica, Klein Bonaire, Klein Curaçao, Martinique, Mexico, Panama, Peru, Puerto Rico, Saba, St. Kitts and Nevis, St. Martin, St. Vincent and the Grenadines, Trinidad and Tobago, United States, U.S. Virgin Islands, Venezuela.

Distribution in Brazil. AL, AM, BA, CE*, ES, MA, MG, MS, PA, PE, PI, RJ, RS, SC, SE, SP.

Microvelia quieta Drake & Carvalho, 1954

Figure 8C

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Igatu, river; −12.8983, −41.3191; alt. 752 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 6 ♀, CEIOC 82610 • Lençóis, PNCD, Mandassaia River; −12.5167, −41.4077; alt. 501 m; 09.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, 6 ♀, CEIOC 82612 • Mucugê, PNCD; −13.0054, −41.3891; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 5 ♀, CEIOC 82609 • Mucugê, PNCD, Andorinhas Waterfall; −13.0174, −41.3441; alt. 965 m; 21.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 5 ♀, CEIOC 82611. – **Piauí** • Caracol, PNSC, stream near the sinkhole; −09.2213, −43.4954; alt. 551 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 11 ♂, 10 ♀, CEIOC 82614 • Caracol, PNSC, puddles; −09.2221, −43.4956; alt. 555 m; 12.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 13 ♂, 6 ♀, CEIOC 82615 • Caracol, PNSC, Riacho do Boi, puddles; −09.2199, −43.4923; alt. 560 m; 13.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 5 ♂, 2 ♀, CEIOC 82617 • Guaribas, PNSC; −09.1402, −43.5614; alt. 539 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82613 • Guaribas, PNSC, Povoado Capim, Arampué, sinkhole ; −09.1841, −43.5070; alt. 517 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, CEIOC 82616.

Identification. *Microvelia quieta* can be grouped with those species of *Microvelia* with the pronotum of the apterous form covering the mesonotum, but not the metanotum. Our specimens were identified based on the terminalia of the male, which has a pair of short, rounded, lateral projections on the proctiger (Moreira 2012).

General distribution. Brazil.

Distribution in Brazil. AL, BA*, MG, MT, PI*, SE.

Microvelia venustatis Drake & Harris, 1933

Figure 8D

New records. BRAZIL – **Bahia** • Mucugê, PNCD,

Véu de Noiva Waterfall; –13.2881, –41.2682; alt. 776 m; 06.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, CEIOC 82618. – **Ceará** • Aiuaba, EEA, weir and stream; –06.6921, –40.1871; alt. 507 m; 04.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 11 ♂, 11 ♀, CEIOC 82619 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 6 ♂, CEIOC 82620 • Aiuaba, EEA, road next to weir; –06.6920, –40.1869; alt. 486 m; 04.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82621 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; C.C. Gonçalves leg.; light trap; 1 ♀, CEIOC 82622.

Identification. *Microvelia venustatis* can be grouped with those species of *Microvelia* with the pronotum extended posteriorly, covering the mesonotum almost entirely, except for short lateral lobes. Our specimens were further identified based on the body short, mainly black, with an orange mark on the pronotum; the antennomere IV fusiform, 4.5 times or longer than the largest width, thicker than antennomeres I–III; and the male terminalia small and strongly inserted into the abdomen (Moreira 2012).

General distribution. Argentina, Brazil, Colombia, Paraguay, Peru.

Distribution in Brazil. AL, AM, BA*, CE*, ES, MA, MG, MT, PA, RJ, SC, SE, SP.

Subfamily Rhagadotarsinae (1 genus, 1 species)
Genus *Rheumatobates* Bergroth, 1892 (1 species)

***Rheumatobates crassifemur schroederi* Hungerford, 1954**

Figure 9A

New records. BRAZIL – **Ceará** • Aiuaba, EEA, Sítio Jatobá, flooded weir; –06.7346, –40.2429; alt. 572 m; 11.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82331 • Aiuaba, EEA, Vaginha da Gameleira, weir; –06.6866, –40.2625; alt. 510 m; 12.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, 1 ♀, CEIOC 82332 • Aiuaba, EEA, Estação Ecológica de Aiuaba, Letreiro Weir; –06.6163, –40.1545; alt. 475 m; 13.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 4 ♀, CEIOC 82333 • Aiuaba, EEA, Sítio Volta de Baixo, full weir; –06.6262, –40.1339; alt. 431 m; 14.IV.2019; J.M.S. Rodrigues leg.; 4 ♂, 10 ♀, CEIOC 82334 • Aiuaba, EEA, weir; –06.6850, –40.1841; alt. 489 m; 04.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♂, 6 ♀, CEIOC 82335 • Aiuaba, EEA, lagoon; –06.6080, –40.1502; alt. 470 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 9 ♂, 20 ♀, CEIOC 82336 • Aiuaba, EEA, weir; –06.7263, –40.2229; alt. 570 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82337 • Aiuaba, EEA, Umbuzeiro Stream; –06.6164, –40.1739; alt. 451 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 14 ♀, CEIOC 82338 • Aiuaba, EEA, puddle; –06.6866, –40.2625; alt. 507 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, 1 ♀, CEIOC 82339 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, near the lake; –06.6020, –40.1245; alt. 425 m; 02.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82340 • Aiuaba, EEA, road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 11 ♂, 12 ♀, CEIOC 82341 • Aiuaba, EEA, road on the side of the weir; –06.6920, –40.1869; alt. 486 m; 04.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82342 • Aiuaba, EEA, Sítio Volta de Baixo, weir; –06.6263, –40.1339; alt. 431 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 15 ♀, CEIOC 82343 • Aiuaba, EEA, road; –06.7259, –40.3065; alt. 634 m; 05.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82344 • Aiuaba, EEA, road near the Gameleira Stream; –06.6870, –40.2682; alt. 493 m; 06.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 3 ♀, CEIOC 82345 • Aiuaba, EEA ba, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; C.C. Gonçalves leg.; light trap; 1 ♂, 2 ♀, CEIOC 82346 • Aiuaba, EEA, road; –06.7002, –40.1919; alt. 493 m; 03.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82347. – **Pernambuco** • Buíque, PNCA, Serra do Catimbau, weirs; –08.5791, –37.2147; alt. 976 m; 14.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 3 ♂, 7 ♀, CEIOC 82348 • Ibimirim, PNCA, poll inside a private property; –08.5463, –37.3832; alt. 568; 19.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, 1 ♀, CEIOC 82349 • Tupanatinga, PNCA, Barro Branco, Comunidade Muquém, weirs; –08.5001, –37.3112; alt. 824 m; 10.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♂, 3 ♀, CEIOC 82350 • Tupanatinga, PNCA, Brejo de São José Farm, temporary puddle; –08.5060, –37.2237; alt. 700 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♂, 2 ♀, CEIOC 82351 • Tupanatinga, PNCA, Gado Road; –08.4866, –37.3404; alt. 663 m; 19.III.2019; H. Rodrigues leg.; light trap; 1 ♂, 1 ♀, CEIOC 82352 • Tupanatinga, PNCA, Igrejinha, barragem de Valdira, temporary puddle; –08.4902, –37.2465; alt. 853 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♂, 2 ♀, CEIOC 82353. – **Piauí** • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; –09.2110, –43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, 6 ♀, CEIOC 82354 • Guaribas, PNSC, puddles on the road to Santa Luz; –09.3760, –43.7914; alt. 685 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, 2 ♀, CEIOC 82355 • Guaribas, PNSC, Brejão, weir; –09.3650, –43.7544; alt. 640 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, 6 ♀, CEIOC 82356.

Identification. Our males were identified based on the relatively uniform dorsolateral row of setae on antennomere IV; the incrassate hind trochanter, connected beyond the base of the hind femur, without a long spur or a fringe of long setae ventrally on the basal lobe; and the hind femur bare at base, without an anteriorly directed dense tuft of bristles in this area (Hungerford 1954). Females from the same localities were associated with the males based on the size and color.

General distribution. Brazil.

Distribution in Brazil. AL, AM, CE, GO, MT, PA, PE, PI, RN, SE.

Figure 9. Collected specimens. **A.** *Rheumatobates crassifemur schroederi*, apterous male from Aiuaba, Ceará (–06.6262, –40.1339). **B.** *Halobatopsis platensis*, apterous male from Mucugê, Bahia (–13.0054, –41.3891). Scale bars: 2 mm.

Subfamily Trepobatinae (1 genus, 1 species)
Tribe Trepobatini (1 genus, 1 species)
Genus *Halobatopsis* Bianchi, 1896 (1 species)

***Halobatopsis platensis* (Berg, 1879)**
Figure 9B

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 2 ♀, CEIOC 82357 • Andaraí, PNCD, Igatu, river; –12.9002, –41.3249; alt. 774 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 2 ♀, CEIOC 82358 • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 6 ♂, 3 ♀, CEIOC 82359 • Ibicoara, PNCD, trail to the Véu de Noiva Waterfall; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 1 ♀, CEIOC 82360 • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 2 ♂, 5 ♀, CEIOC 82361 • Itaeté, PNCD, Samina River; –13.1105, –41.1587; alt. 413 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 4 ♂, 3 ♀, CEIOC 82362 • Lençóis, PNCD, Mandassaia River; –12.5167, –41.4077; alt. 501 m; 09.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 3 ♂, 3 ♀, CEIOC 82363 • Lençóis, PNCD, Ribeirão de Baixo, river; –12.5865, –41.3822; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 4 ♀, CEIOC 82364 • Lençóis, PNCD, river; –12.6008, –41.3810; alt. 346 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♀, CEIOC 82365 • Lençóis, PNCD, Capivara River; –12.6232, –41.3763; alt. 329 m; 09.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 3 ♂, CEIOC 82366 • Mucugê, PNCD, Paraguaçu River; –12.9908, –41.3507; alt. 893 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 6 ♂, 6 ♀, CEIOC 82367 • Mucugê, PNCD, river; –13.0054; –41.3891; alt. 981 m; 19.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 5 ♂, 11 ♀, CEIOC 82368 • Mucugê, PNCD, river; –13.0174, –41.3441; alt. 965 m; 21.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 2 ♀, CEIOC 82369 • Mucugê, PNCD, trail to the Véu de Noiva Waterfall; –13.2886, –41.2646; alt. 752 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 6 ♀, CEIOC 82370 • Mucugê, PNCD, Véu de Noiva Waterfall; –13.2881, –41.2682; alt. 776 m; 06.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, CEIOC 82371 • Palmeiras, PNCD, Preto River; –12.6036, –41.5250; alt. 820 m; 05.V.2021; J.M.S. Rodrigues , J.F. Barbosa leg.; 2 ♀, CEIOC 82372. – **Piauí** • Guaribas, PNSC, Povoado Capim, Arampué, sinkhole; –09.1841, –43.5070; alt. 516 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 4 ♂, 6 ♀, CEIOC 82373.

Identification. Our specimens were identified based on the mesonotum with longitudinal black marks; the male abdominal sternum VIII without a ventral projection; and the female abdominal laterotergites slightly elevated, not reflected over the mediotergites (Nieser and Melo 1999).

General distribution. Argentina, Brazil, Paraguay, Peru, Uruguay.

Distribution in Brazil. AL, BA, DF, ES, GO, MA, MG, MT, MS, PI, PR, RJ, RS, SE, SP.

Family Hebridae (2 genera, 2 species)
Subfamily Hebrinae (2 genera, 2 species)

Genus *Lipogomphus* Berg, 1879 (1 species)

***Lipogomphus lacuniferus* Berg, 1879**
Figure 10A

New records. BRAZIL – **Ceará** • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 2 ♂, 3 ♀, CEIOC 82374 • same data, except: C.C. Gonçalves leg.; 1 ♂, CEIOC 82375 • Aiuaba, EEA, road near the Gameleira Stream; –06.6870, –40.2682; alt. 493 m; 06.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 2 ♀, CEIOC 82376 • Aiuaba, EEA, road; –06.7002, –40.1919; alt. 493 m; 03.VI.2021; J.M.S. Rodrigues leg.; light trap; 5 ♀, CEIOC 82377 • same data, except: C.C. Gonçalves leg.; 1 ♂, CEIOC 82378 • Aiuaba, EEA, road next to weir; –06.6920, –40.1869; 486 m a.s.l.; 04.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82647.

Identification. Our specimens of *L. lacuniferus* were identified mainly based on the shape of the male paramere, which was figured by Drake and Chapman (1958: 320).

General distribution. Argentina, Bolivia, Brazil, Paraguay, Uruguay.

Distribution in Brazil. AL, CE*, MG.

Genus *Merragata* White, 1877 (1 species)

***Merragata hebroides* White, 1877**
Figure 10B

New records. BRAZIL – **Ceará** • Aiuaba, EEA, Sítio Jatobá, weir; –06.7351, –40.2424; alt. 571 m; 03.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, 12 ♀, CEIOC 82379 • Aiuaba, EEA, weir; –06.7263, –40.2229; alt. 570 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 2 ♂, 4 ♀, CEIOC 82380 • Aiuaba, EEA, weir; –06.7384, –40.2475; alt. 584 m; 07.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 3 ♂, 7 ♀, CEIOC 82381.

Identification. Our specimens of *M. hebroides* were identified mainly based on the shape of the male paramere, which was figured by Drake and Chapman (1958: 320).

General distribution. Argentina, Aruba, Bolivia, Bonaire, Brazil, Canada, Canary Islands, Colombia, Costa Rica, Cuba, Curaçao, Ecuador, Hawaiian Islands, Jamaica, Mexico, Panama, Paraguay, Peru, Puerto Rico, United States, Uruguay, Venezuela.

Distribution in Brazil. AL, AM, CE*, MA, MS, MT, SE.

Family Hydrometridae (1 genus, 1 species)
Subfamily Hydrometrinae (1 genus, 1 species)
Genus *Hydrometra* Latreille, 1797 (1 species)

***Hydrometra argentina* Berg, 1879**
Figure 10C

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82382. – **Piauí** • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; –09.2110, –43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 5 ♂, 8 ♀, CEIOC 82383.

Identification. Our specimens were identified by the body length shorter than 12.5 mm; the clypeus conate, clearly longer than broad; the pro- and mesoacetabula with circular punctures; the male abdominal sternum VI with spinose projections; and the male abdominal segment VIII without lateral hooks (Moreira and Barbosa 2013).

General distribution. Argentina, Bolivia, Brazil, Chile,

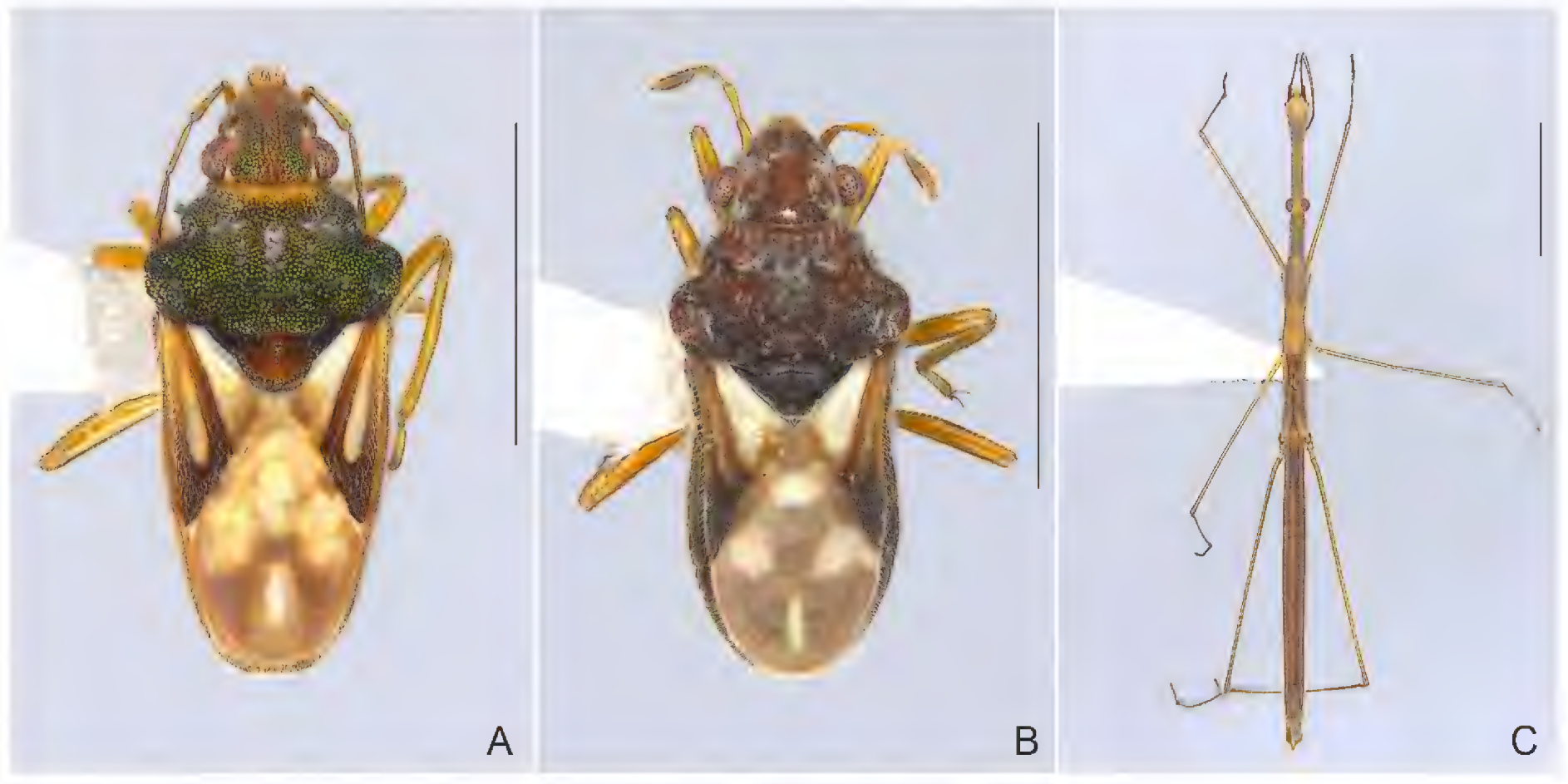

Figure 10. Collected specimens. **A.** *Lipogomphus lacuniferus,* macropterous male from Aiuaba, Ceará (–06.6920, –40.1869). **B.** *Merragata hebroides,* macropterous male from Aiuaba, Ceará (–06.7263, –40.2229). **C.** *Hydrometra argentina*, brachypterous male from Caracol, Piauí. Scale bars: A, B = 1 mm; C = 2 mm.

Colombia, Ecuador, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela.

Distribution in Brazil. AL, AM, AP, BA, ES, MG, MS, MT, PA, PB, PI*, PR, RJ, RS, SC, SE, SP.

Family Mesoveliidae (2 genera, 3 species)
Subfamily Madeoveliinae (1 genus, 1 species)
Genus *Mesoveloidea* Hungerford, 1929 (1 species)

***Mesoveloidea williamsi* Hungerford, 1929**
Figure 11A

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Garapa River; –12.7456, –41.3453; alt. 330 m; 08.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, CEIOC 82384 • Lençóis, PNCD, Ribeirão do Meio, river; –12.5880, –41.3878; alt. 331 m; 08.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, 2 ♀, CEIOC 82385 • Lençóis, PNCD, Capivara River; –12.6232, –41.3763; alt. 329 m; 09.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82386.

Identification. Of the two species currently assigned to *Mesoveloidea*, *M. williamsi* is the only one that is widely distributed and also the only heretofore recorded from Brazil. The male parameres of our specimens match those figured by Moreira et al. (2006).

General distribution. Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Panama, Peru, Suriname, Trinidad and Tobago, Venezuela.

Distribution in Brazil. AM, AP, BA*, MG, RJ.

Subfamily Mesoveliinae (1 genus, 2 species)
Genus *Mesovelia* Mulsant & Rey, 1852 (2 species)

***Mesovelia amoena* Uhler, 1894**
Figure 11B

New records. BRAZIL – **Bahia** • Itaeté, PNCD, near Timbó River; –13.0759, –41.1755; alt. 328 m; 07.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82387 • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♀, CEIOC 82388 • Itaeté, PNCD, Samina River; –13.1105, –41.1587; alt. 413 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♀, CEIOC 82389 • Lençóis, PNCD, Ribeirão do Meio, river; –12.5880, –41.3878; alt. 331 m; 08.V.2021; J.M.S. Rodrigues leg.; light trap; 4 ♀, CEIOC 82390 • Lençóis, PNCD, Capivara River; –12.6232, –41.3763; alt. 329 m; 09.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82391 • Lençóis, PNCD, Ribeirão do Meio, river; –12.5880, –41.3878; alt. 331 m; 08.V.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82392 • Lençóis, PNCD, Ribeirão do Meio, river; –12.5860, –41.3817; alt. 341 m; 22.VIII.2018; J.S. Prando leg.; light trap; 1 ♀, CEIOC 82393 • same data, except: R. Carrenho leg.; 2 ♀, CEIOC 82394 • Lençóis, PNCD, Ribeirão de Baixo, river; –12.5865, –41.3822; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82395 • Lençóis, PNCD, river; –12.5791, –41.3835; alt. 347 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82396 • Mucugê, PNCD, Andorinhas Waterfall; –13.0174, –41.3441; alt. 965 m; 21.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82397. – **Ceará** • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters; –06.6025, –40.1286; alt. 436 m; 10.IV.2019; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82398 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♀, CEIOC 82399 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82400 • Aiuaba, EEA, road; –06.7259, –40.3065; alt. 634 m; 05.VI.2021; J.M.S. Rodrigues leg.; light trap; 4 ♀, CEIOC 82401 • Aiuaba, EEA, road near the Gameleira Stream; –06.6870, –40.2682; alt. 493 m; 06.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82402 • Aiuaba, EEA, road; –06.7002, –40.1919; alt. 493 m; 03.VI.2021; C.C. Gonçalves leg.; light trap; 2 ♀, CEIOC 82403. – **Pernambuco** • Buíque, PNCA, Olho D'água do Pico; –08.5577, –37.1950; alt. 753 m; 15.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♀, CEIOC 82404 • Buíque, PNCA, pool approximately 400 m west of the brigadistas house, perennial lake; –08.5724, –37.2367; alt. 818 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82405 • Buíque, PNCA, fountain approximately 400 m west of the brigadistas' house, perennial lake, hygropetric environment; –08.5725, –37.2367; alt. 808 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 7 ♀, CEIOC 82406. – **Piauí** • Caracol, PNSC, near the road; –09.2137, –43.4986; alt. 514 m; 11.XII.2018; C.C. Gonçalves leg.; mixed light trap; 1 ♀, CEIOC 82408 • Caracol, PNSC, near the road; –09.2149, –43.5036; alt. 513 m; 12.XII.2018; C.C. Gonçalves leg.; mixed light trap; 1 ♀, CEIOC 82409 • Guaribas, PNSC, puddles on the Catedral; –09.1377, –43.5974; alt. 524 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 3 ♀, CEIOC 82410 • Guaribas, PNSC, Povoado Capim, Arampué, sinkhole; –09.1841, –43.5070; alt. 517 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♀, CEIOC 82411.

Identification. This species is apparently parthenogenetic throughout most of the Neotropics. Our female specimens were identified based on the body brownish, about 2 mm long, and the middle femur without spines on the posterior surface (Moreira et al. 2008).

General distribution. Argentina, Belize, Bonaire, Brazil, Canada, Colombia, Costa Rica, Cuba, Curaçao, Dominican Republic, French Guiana, Galápagos Islands, Grenada, Hawaiian Islands, Jamaica, Martinique, Mexico, Panama, Puerto Rico, St. Eustatius, St. Vincent and the Grenadines, Trinidad and Tobago, United States, U.S. Virgin Islands.

Distribution in Brazil. AL, AM, BA, CE, ES, MA, MG, MT, PA, PE*, PI*, PR, RJ, RO, SE, SP.

***Mesovelia mulsanti* White, 1879**
Figure 11C

New records. BRAZIL – **Bahia** • Andaraí, PNCD,

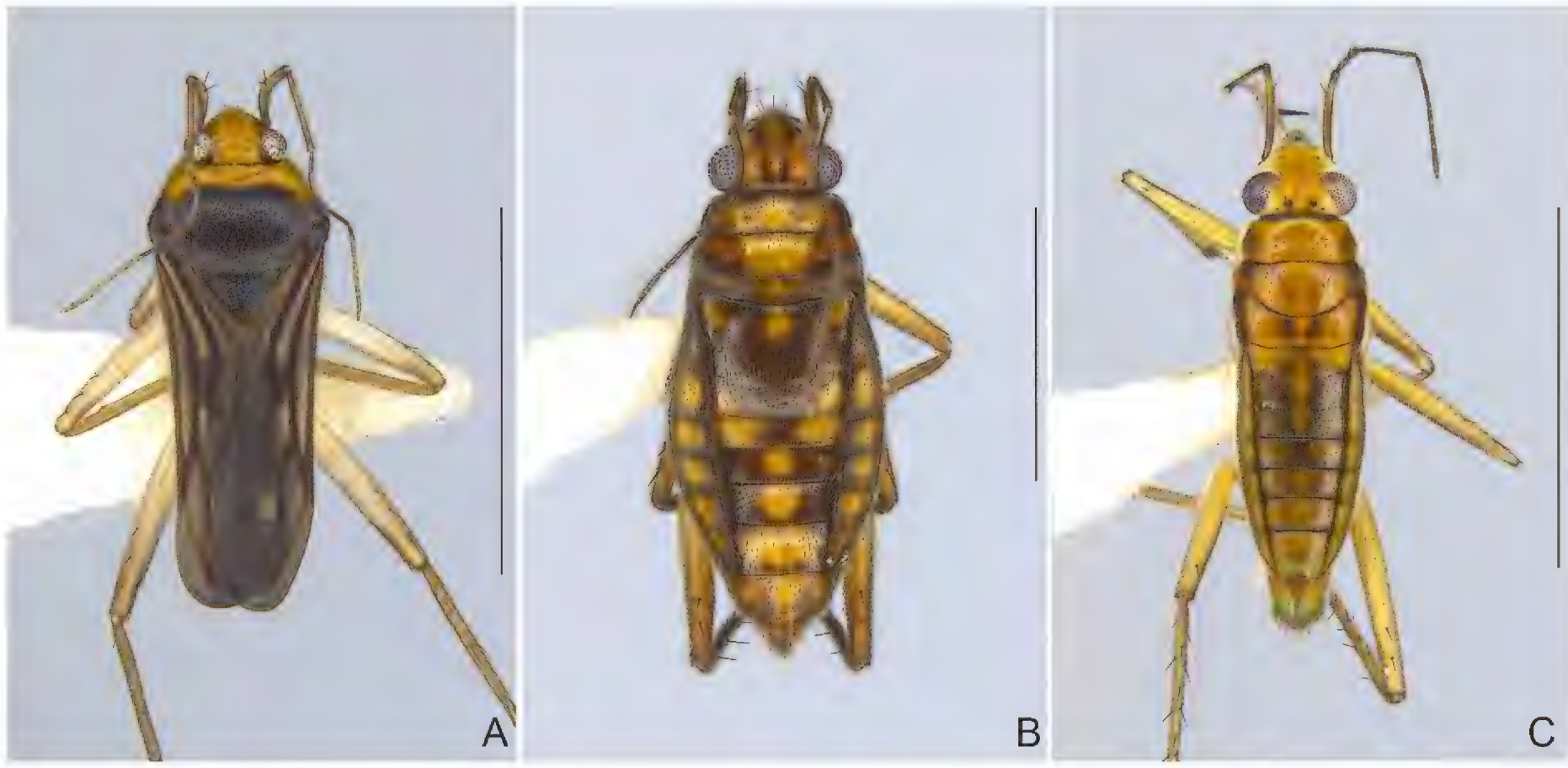

Figure 11. Collected specimens. **A.** *Mesoveloidea williamsi*, macropterous male from Andaraí, Bahia. **B.** *Mesovelia amoena*, apterous female from Itaeté, Bahia (–13.1105, –41.1587). **C.** *M. mulsanti*, apterous male from Guaribas, Piauí (–09.3696, –43.7601). Scale bars: A = 1 mm; B, C = 2 mm.

Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82413 • Itaeté, PNCD, Samina River; –13.1105, –41.1587; alt. 413 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♂, 1 ♀, CEIOC 82412 • Lençóis, PNCD, Ribeirão do Meio, river; –12.5860, –41.3817; alt. 341 m; 22.VIII.2018; J.S. Prando leg.; light trap; 1 ♂, 2 ♀, CEIOC 82414 • same data, except: R. Carrenho leg.; 2 ♂, CEIOC 82415 • Lençóis, PNCD, Ribeirão de Baixo, river; –12.5865, –41.3822; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 9 ♂, 4 ♀, CEIOC 82416 • Lençóis, PNCD, river; –12.6008, –41.3810; alt. 345 m; 22.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 2 ♀, CEIOC 82417. – **Ceará** • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♀, CEIOC 82418 • Aiuaba, EEA, road; –06.7259, –40.3065; alt. 634 m; light trap; 05.VI.2021; J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82419 • Aiuaba, EEA, Gameleira House, weir; –06.6992, –40.2908; alt. 532 m; 09.IV.2019; J.M.S. Rodrigues leg.; 6 ♂, 6 ♀, CEIOC 82420 • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 518 m; 09.VI.2021; J.M.S. Rodrigues leg.; 2 ♂, 1 ♀, CEIOC 82421 • Aiuaba, EEA, Cajueiro House, weir; –06.6722, –40.1846; alt. 450 m; 10.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82422 • Aiuaba, EEA, Sítio Boa Vista, flooded area; –06.7255, –40.2226; alt. 570 m; 11.IV.2019; J.M.S. Rodrigues leg.; 1 ♂, CEIOC 82423 • Aiuaba, EEA, Sítio Jatobá, flooded weir; –06.7346, –40.2429; alt. 572 m; 11.IV.2019; J.M.S. Rodrigues leg.; 3 ♂, 5 ♀, CEIOC 82424 • Aiuaba, EEA, Vaginha da Gameleira, weir; –06.6866, –40.2625; alt. 510 m; 12.IV.2019; J.M.S. Rodrigues leg.; 2 ♂, 2 ♀, CEIOC 82425 • Aiuaba, EEA, Rozio Lagoon, weir; –06.6231, –40.1487; alt. 492 m; 13.IV.2019; J.M.S. Rodrigues leg.; 3 ♂, 1 ♀, CEIOC 82426 • Aiuaba, EEA, Letreiro Weir; –06.6163, –40.1545; alt. 475 m; 13.IV.2019; J.M.S. Rodrigues leg.; 1 ♀, CEIOC 82427 • Aiuaba, EEA, Sítio Volta de Baixo, full weir; –06.6262, –40.1339; alt. 431 m; 14.IV.2019; J.M.S. Rodrigues leg.; 6 ♂, 5 ♀, CEIOC 82428 • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♂, 6 ♀, CEIOC 82429 • Aiuaba, EEA, Sítio Jatobá, weir; –06.7351, –40.2424; alt. 571 m; 03.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 15 ♂, 4 ♀, CEIOC 82430 • Aiuaba, EEA, weir; –06.6850, –40.1841; alt. 489 m; 04.VI.2021; J.M.S. Rodrigues , F.F.F. Moreira leg.; 9 ♂, 3 ♀, CEIOC 82431 • Aiuaba, EEA, Umbuzeiro Stream; –06.6164, –40.1739; alt. 451 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 11 ♂, 11 ♀, CEIOC 82432 • Aiuaba, EEA, weir and stream; –06.6921, –40.1871; alt. 507 m; 04.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 2 ♂, 1 ♀, CEIOC 82433 • Aiuaba, EEA, weir; –06.7384, –40.2475; alt. 584 m; 07.VI.2021; J.M.S. Rodrigues, C.C. Gonçalves leg.; 5 ♂, 4 ♀, CEIOC 82434 • Aiuaba, EEA, Sítio Volta de Baixo, weir; –06.6263, –40.1339; alt. 431 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 6 ♂, 1 ♀, CEIOC 82435 • Aiuaba, EEA, tributary / weir; –06.6997, –40.1916; alt. 513 m; 07.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 3 ♂, 2 ♀, CEIOC 82436 • Aiuaba, EEA, road; –06.7259, –40.3065; alt. 634 m; 07.VI.2021; J.M.S. Rodrigues leg.; light trap; 1 ♂, CEIOC 82437 • Aiuaba, EEA, Riacho Serra Nova, stagnant water with macrophytes; –06.6026, –40.1248; alt. 436 m; 06.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82438 • Aiuaba, EEA, lagoon; –06.6080, –40.1502; alt. 470 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 2 ♀, CEIOC 82439 • Aiuaba, EEA, weir; –06.7263, –40.2229; alt. 570 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 4 ♂, 3 ♀, CEIOC 82440.

– **Pernambuco** • Buíque, PNCA, Caldeirões da Igrejinha, temporary puddles; –08.5024, –37.2543; alt. 949 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 6 ♂, 14 ♀, CEIOC 82407 • Buíque, PNCA, temporary puddle next to the riverbed; –08.5834, –37.2469; alt. 745 m; 18.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♀,CEIOC 82464 • Ibimirim, PNCA, poll inside a private property ; –08.5463, –37.3832; alt. 568 m; 19.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 2 ♂, 1 ♀,CEIOC 82465 • Tupanatinga, PNCA, Barro Branco, Comunidade Muquém, weirs; –08.5001, –37.3112; alt. 824 m; 10.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♀, CEIOC 82453 • Tupanatinga, PNCA, Região dos Breus, Umburanas Trail, pothole; –08.4891, –37.2637; alt. 896 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♂, CEIOC 82454 • Tupanatinga, PNCA, potholes next to a dirt road near Igrejinha; –08.5024, –37.2543; alt. 949 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 2 ♂, 2 ♀, CEIOC 82455 • Tupanatinga, PNCA, Serrinha, potholes; –08.5188, –37.2337; alt. 929 m; 13.III.2021; J.M.S. Rodrigues, R. Jordão leg.; 1 ♂, 7 ♀, CEIOC 82456 • Tupanatinga, PNCA, temporary puddle on the trail to Farinha House; –08.5615, –37.2339; alt. 814 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 1 ♂, 2 ♀, CEIOC 82457 • Tupanatinga, PNCA, Barreiro do Pititi, temporary puddle; –08.5599, –37.2375; alt. 832 m; 14.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♀, CEIOC 82458 • Tupanatinga, PNCA, Brejo de São José Farm, near the headquarters, temporary puddle; –08.5372, –37.2200; alt. 699 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 3 ♂, 3 ♀,CEIOC 82459 • Tupanatinga, PNCA, Brejo de São José Farm, temporary puddle; –08.5060, –37.2237; alt. 700 m; 16.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 9 ♂, 10 ♀,CEIOC 82460 • Tupanatinga, PNCA, Laranjeiras Farm, temporary puddle beside the road; –08.5002, –37.3111; alt. 825 m; 17.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 4 ♂, 11 ♀,CEIOC 82461 • Tupanatinga, PNCA, Juá Farm, temporary puddle covered with small macrophytes; –08.4116, –37.3601; alt. 541 m; 17.III.2019; H. Rodrigues leg.; 2 ♂, CEIOC 82462 • Tupanatinga, PNCA, Juá Farm, temporary stream that cuts the farm road, puddles along the riverbed; –08.4350, –37.3469; alt. 548 m; 17.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 4 ♂, 2 ♀,CEIOC 82463 • Tupanatinga, PNCA, Igrejinha, barragem de Valdira, temporary puddle; –08.4902, –37.2465; alt. 853 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 7 ♂, 6 ♀,CEIOC 82466 • Tupanatinga, PNCA, Caldeirões da Igrejinha, temporary puddles; –08.5024, –37.2543; alt. 949 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 14 ♂, 7 ♀,CEIOC 82467 • Tupanatinga, PNCA, Chapadão, temporary puddle; –08.5244, –37.2394; alt. 937 m; 20.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 8 ♂, 7 ♀,CEIOC 82468 • Tupanatinga, PNCA, Serrinha, Casa de Edivar, pothole with temporary puddles; –08.5189, –37.2335; alt. 921 m; 21.III.2019; H. Rodrigues, J.M.S. Rodrigues leg.; 18 ♂, 14 ♀,CEIOC 82469. – **Piauí** • Bom Jesus, PNSC, puddles on the road to Santa Luz, hunters shortcut; –09.3575, –43.8498; alt. 643 m; 14.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 1 ♂, CEIOC 82450 • Caracol, PNSC, puddles besides the road, near the cemetery; –09.2185, –43.4904; alt. 565 m; 13.II.2020; J.M.S. Rodrigues , I.R.S. Cordeiro leg.; 1 ♂, 3 ♀, CEIOC 82451 • Caracol, PNSC, road in the park near Povoado Capim; –09.2149, –43.5034; alt. 512 m; 17.II.2020; J.M.S. Rodrigues leg.; light trap; 1 ♂, 1 ♀, CEIOC 82452 • Caracol, PNSC, weir; –09.2131, –43.4985; alt. 512 m; 11.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 4 ♂, 5 ♀, CEIOC 82441 • Caracol, PNSC, weir; –09.2109, –43.5201; alt. 498 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♂, 6 ♀, CEIOC 82442 • Caracol, PNSC, puddle between the Janela do Sertão belvedere and the cemetery; –09.2192, –43.4902; alt. 566 m; 10.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, 3 ♀, CEIOC 82444 • Caracol, PNSC, Povoado Sobrado, flooded portion of pasture area; –09.2110, –43.5202; alt. 499 m; 16.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, 5 ♀, CEIOC 82447 • Guaribas, PNSC, puddle on dirt road; –09.1649, –43.6322; alt. 409 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82443 • Guaribas, PNSC, puddles on the road to Santa Luz; –09.3696, –43.7601; alt. 657 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 2 ♂, CEIOC 82445 • Guaribas, PNSC, weir; –09.3649, –43.7546; alt. 640 m; 14.XII.2018; J.M.S. Rodrigues, O.M. Magalhães leg.; 1 ♂, CEIOC 82446 • Guaribas, PNSC, brejão, weir; –09.3650, –43.7544; alt. 640 m; 18.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 3 ♀, CEIOC 82448 • Jurema, PNSC, Sucumbido, potholes; –08.8792, –43.1658; alt. 549 m; 15.II.2020; J.M.S. Rodrigues, I.R.S. Cordeiro leg.; 2 ♂, 1 ♀, CEIOC 82449.

Identification. Our specimens of *M. mulsanti* can be immediately distinguished from those of *M. amoena* by the presence of a row of black spinules on the middle femur in both sexes. Additionally, males have a body length between 3.00 and 4.00 mm and a pair of tightly packed clusters of black spinules ventrally on abdominal segment VIII (Spangler 1990; Moreira et al. 2008).

General distribution. Antigua and Barbuda, Argentina, Aruba, Barbados, Belize, Bolivia, Bonaire, Brazil, Canada, Colombia, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Hawaiian Islands, Honduras, Jamaica, Klein Curaçao, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Martin, St. Vincent and the Grenadines, Trinidad and Tobago, United States, U.S. Virgin Islands, Venezuela.

Distribution in Brazil. AL, AM, AP, BA, CE, ES, GO, MA, MG, MS, MT, PA, PE, PI, PR, RJ, RO, RS, SC, SE, SP.

Family Veliidae (4 genera, 5 species)
Tribe Veliinae (4 genera, 5 species)
Genus *Callivelia* Polhemus, 2021 (1 species)

Figure 12. Collected specimens. **A.** *Callivelia bipunctata*, micropterous male from Lençóis, Bahia (–12.5791, –41.3835). **B.** *Oiovelia cunucunumana*, macropterous male from Mucugê, Bahia (–13.2881, –41.2682). **C.** *O. viannai*, macropterous male from Itaeté, Bahia (–13.0749, –41.1737). Scale bars: 2 mm.

***Callivelia bipunctata* (Rodrigues, Moreira, Nieser, Chen & Melo, 2014)**

Figure 12A

New records. BRAZIL – **Bahia** • Andaraí, PNCD, Donana Waterfall; –12.8401, –41.3235; alt. 353 m; 20.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♀, CEIOC 82623 • Itaeté, PNCD, Samina River; –13.1105, –41.1587; alt. 413 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 1 ♀, CEIOC 82625 • Lençóis, PNCD, river; –12.5791, –41.3835; alt. 348 m; 22.VIII.2018; J.M.S. Rodrigues, F. F.F. Moreira leg.; 4 ♂, 6 ♀, CEIOC 82624.

Identification. Our specimens can be distinguished from its congeners in having the body shorter than 5 mm, antennomere II distinctly shorter than the antennomere III, a prominent vertical process centrally on the pronotum lacking, and the male paramere slender and elongate (Polhemus 2021).

General distribution. Brazil, Paraguay.

Distribution in Brazil. BA*, MG, MS, MT, RS.

Genus *Oiovelia* Drake & Maldonado Capriles, 1952
(2 species)

***Oiovelia cunucunumana* Drake & Maldonado-Capriles, 1952**

Figure 12B

New records. BRAZIL – **Bahia** • Mucugê, PNCD, Véu de Noiva Waterfall; –13.2881, –41.2682; alt. 776 m; 06.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 7 ♂, 2 ♀, CEIOC 82627.

Identification. Our specimens of *O. cunucunumana* can be distinguished from other species of *Oiovelia* in having the head dark-brown to black; the pronotum orange to reddish-brown, with the lateral margins darker; the forewing with faint pruinosity between the cells; the male proctiger without spines on the dorsal surface; and the male paramere without an expansion on the ventral surface (Floriano and Rodrigues 2016).

General distribution. Argentina, Brazil, Colombia, French Guiana, Paraguay, Peru, Venezuela.

Distribution in Brazil. AM, AP, BA, MG, PA, SC, SP.

***Oiovelia viannai* Rodrigues & Melo, 2014**

Figure 12C

New records. BRAZIL – **Bahia** • Itaeté, PNCD, Timbó River; –13.0749, –41.1737; alt. 428 m; 07.V.2021; J.M.S. Rodrigues, J.F. Barbosa leg.; 31 ♂, 27 ♀, CEIOC 82626.

Identification. Our specimens of *O. viannai* can be distinguished from *O. cunucunumana*, a very similar species, by the pronotum dark-brown to black and the male paramere with a slight expansion on the distal half of the ventral surface (Floriano and Rodrigues 2016).

General distribution. Brazil.

Distribution in Brazil. BA*, MG.

Genus *Platyvelia* Polhemus & Polhemus, 1993
(1 species)

***Platyvelia brachialis* (Stål, 1860)**

Figure 13A

New records. BRAZIL – **Bahia** • Mucugê, PNCD; –13.2932, –41.2414; alt. 721 m; 23.VIII.2018; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, 3 ♀, CEIOC 82628. – **Ceará** • Aiuaba, EEA, Sítio Volta de Cima, ICMBio Headquarters, lake; –06.6019, –40.1246; alt. 434 m; 05.VI.2021; J.M.S. Rodrigues, F.F.F. Moreira leg.; 1 ♂, CEIOC 82629.

Identification. Our specimens of *P. brachialis* were identified based on the following characteristics: body longer than 4.50 mm; anterior margin of the pronotum narrower than the head width through the eyes, with the anterolateral corners not projected; male

Figure 13. Collected specimens. **A.** *Platyvelia brachialis*, micropterous male from Mucugê, Bahia (–13.2932, –41.2414). **B.** *Stridulivelia quadrispinosa*, macropterous male from Aiuaba, Ceará (–06.6974, –40.2819). Scale bars: 2 mm.

abdominal sternum VI without a median projection; male abdominal sternum VII with the posterior margin concave; and the male paramere not sculptured, slightly constricted at mid-length, tapering towards the apex (Rodrigues et al. 2021b).

General distribution. Argentina, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Jamaica, Mexico, Nicaragua, Panama, Peru, Suriname, Trinidad and Tobago, United States, Venezuela.

Distribution in Brazil. AL, BA*, CE*, ES, GO, MG, MS, MT, PE, PI, RJ, RR, SC, SE, SP.

Genus *Stridulivelia* Hungerford, 1929 (1 species)

***Stridulivelia quadrispinosa* (Hungerford, 1929)**
Figure 13B

New records. BRAZIL – **Ceará** • Aiuaba, EEA, flooded area beside the road; –06.6974, –40.2819; alt. 505 m; 08.VI.2021; J.M.S. Rodrigues, A.S. de Freitas leg.; light trap; 5 ♂, 4 ♀, CEIOC 82630 • Aiuaba, EEA, road near Gameleira Stream; –06.6870, –40.2682; alt. 493 m; 06.VI.2021; J.M.S. Rodrigues leg.; light trap; 2 ♂, CEIOC 82631.

Identification. Our specimens of *S. quadrispinosa* were identified based on the following characteristics: body length 4.70–5.40 mm; hind femur incrassate, more than 2× wider than middle femur, with a spine on distal 2/3 of the posterior margin distinctly larger than the others; stridulatory structure on lateral margin of abdominal laterotergites formed by a row of fine vertical ridges; and apex of male paramere rounded (Floriano et al. 2017).

General distribution. Bolivia, Brazil, Guyana, Peru, Venezuela.

Distribution in Brazil. AL, CE*, ES, MG, MT, PA, RJ.

Discussion

We collected individuals of 28 species, 17 genera, and five families of Gerromorpha in the UCs studied. The richest UC is the PNCD, with 23 species and 12 genera, followed by the EEA, with 15 species and 11 genera, the PNSC with 14 species and nine genera, and the PNCA with five species and three genera. Additional species of the genera *Paravelia* Breddin, 1898 and *Rhagovelia* Mayr, 1865 (Veliidae) from the study area are treated separately in two works: Rodrigues and Moreira (2022) and Paiva et al. (in prep.).

The following four species were collected in all UCs studied: *Microvelia longipes*, *Mi. pulchella* (Gerridae), *Mesovelia amoena*, and *Mesoveli. mulsanti* (Mesoveliidae). All of them are widely distributed in the Neotropical region or throughout the Americas, and the last two have also been introduced to the Hawaiian Islands (Moreira 2023a, 2023d). Altogether, eight species of Gerromorpha are recorded for the first time from the Caatinga, namely *Limnogonus recurvus*, *Mi. hamadae*, *Mi. nelsoni*, *Mi. quieta* (Gerridae), *Lipogomphus lacuniferus* (Hebridae), *Mesoveloidea williamsi* (Mesoveliidae), *Callivelia bipunctata*, and *Stridulivelia quadrispinosa* (Veliidae). This increases the number of semiaquatic bugs known from this biome from 29 (Moreira 2023a, 2023b, 2023c, 2023d, 2023e) to 37.

Eleven species are herein recorded from Bahia for the first time, increasing the total number in the state to 31: *Lim. profugus*, *Mi. ayacuchana*, *Mi. hamadae*, *Mi.*

mimula, *Mi. nelsoni*, *Mi. quieta*, *Mi. venustatis* (Gerridae), *Mesovelo. williamsi* (Mesoveliidae), *C. bipunctata*, *Oiovelia viannai*, and *Platyvelia brachialis* (Veliidae). Nine species were collected exclusively in the PNCD during our study: *Cylindrosthetus palmaris*, *Lim. recurvus*, *Mi. ayacuchana*, *Mi. hamadae*, *Mi. nelsoni* (Gerridae), *Mesovelo. williamsi* (Mesoveliidae), *C. bipunctata*, *O. cunucunumana*, and *O. viannai* (Veliidae). The only two gerromorphans previously recorded from the PNCD are *Halobatopsis platensis* (Gerridae) and *O. cunucunumana* (Veliidae) (Moreira et al. 2016), both of which were found in our samples.

Ten species are herein recorded from Ceará for the first time, increasing the total number in the state to 17: *Lim. aduncus aduncus*, *Mi. longipes*, *Mi. pulchella*, *Mi. venustatis*, *Neogerris lubricus*, *Tachygerris adamsoni* (Gerridae), *Lip. lacuniferus*, *Merragata hebroides* (Hebridae), *Pl. brachialis*, and *S. quadrispinosa* (Veliidae). Three species were found exclusively in the EEA during this work: *Lip. lacuniferus*, *Mer. hebroides* (Hebridae), and *S. quadrispinosa* (Veliidae). The only semiaquatic bug previously recorded from the EEA is *Pa. bilobata* Rodrigues, Moreira, Nieser, Chen & Melo, 2014 (Veliidae), which was collected in this UC during our surveys and reported elsewhere (Rodrigues and Moreira 2022).

The following eight species are herein reported from Piauí for the first time, increasing the number of species in the state to 19: *Brachymetra albinervus*, *Lim. aduncus aduncus*, *Lim. profugus*, *Mi. longipes*, *Mi. mimula*, *Mi. quieta* (Gerridae), *Hydrometra argentina* (Hydrometridae), and *Mesoveli. amoena* (Mesoveliidae). Despite the fair amount of first state records, no species are recorded here exclusively from the PNSC. Only the following pair of semiaquatic bugs were previously reported from the PNSC: *T. adamsoni* (Gerridae) (Rodrigues et al. 2012) and *Pa. nieseri* Moreira & Barbosa, 2012 (Veliidae) (Rodrigues and Moreira 2022). Both were found in our samples in this UC, and the former is recorded here, while the latter was reported elsewhere (Rodrigues and Moreira 2022).

Finally, two species are herein recorded from Pernambuco for the first time, increasing the number of species in the state to 12: *Mi. longipes* (Gerridae) and *Mesoveli. amoena* (Mesoveliidae). In addition to the small amount of first state records, no species are reported exclusively from the PNCA in this work. Only two species of Gerromorpha were previously recorded from the PNCA, namely *Pa. luisi* Rodrigues & Moreira, 2022 and *Pa. digitata* Rodrigues & Moreira, 2016 (Veliidae), both of which were collected during our surveys and reported elsewhere (Rodrigues and Moreira 2022).

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Authors' Contributions

Conceptualization: FFFM. Data curation: FFFM. Formal analysis: JMSR. Funding acquisition: FFFM. Investigation: JMSR. Methodology: FFFM. Resources: FFFM. Supervision: FFFM. Visualization: JMSR. Project administration: FFFM. Software: JMSR. Validation: FFFM. Writing – original draft: JMSR. Writing – review and editing: FFFM.

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